

# ANDREA PALLADIO

FIRST BOOK of



## ARCHITECTURE,

Corrected from his original Edition printed at VENICE, 1581,

Wherein is pointed out

The various Mistakes and Contradictions between the *Chapters* and *Figur'd Draughts*; laid down both *Geometrical*, and in *Perspective*, in an entire new and easy Method.

To these are added,

Thirteen different Designs for *Pavements, Halls, Lobbies, &c.* Ten of which are entirely new. The Whole being design'd to render this Science more useful to *Gentlemen Draughtsmen*, and *Builders* in general; more particular to those who desire to attain to the Knowledge of *Perspective*.

These Examples are explained and demonstrated in a Manner so easy, that any Person who has the least Notion of drawing a *Geometrical Design*, may, with little Trouble, by the Help of this Treatise alone, lay down the same in *Perspective*.

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IN TWENTY-EIGHT COPPER-PLATES.

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By WILLIAM HALFPENNY.

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L O N D O N:

Printed for J. BRINDLEY, Bookseller to his Royal Highness the Prince of Wales, in *New Bond-Street*, and R. SAYER, in *Fleet-street*. M.DCC.LI.



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T H E  
P R E F A C E.



*THE Publication of a Book in Architecture at this Time, may seem a Matter of little Consequence, there having been many lately published, more particular those from Palladio, many of which having been borrowed from second and third-hand Copies; others there are who have traced his original Edition, which I can aver with great Truth, they have not only followed his Perfections, but Imperfections also, which I have endeavoured to shew in this Treatise; it may be presum'd this might be occasion'd by the great Hurry of Affairs that great Master was then employ'd in: Care has been taken in using such of his Proportions as may be most suitable to the British Taste; if, therefore, what is laid down in this Work shall prove useful to the Reader, is what is intended by me,*

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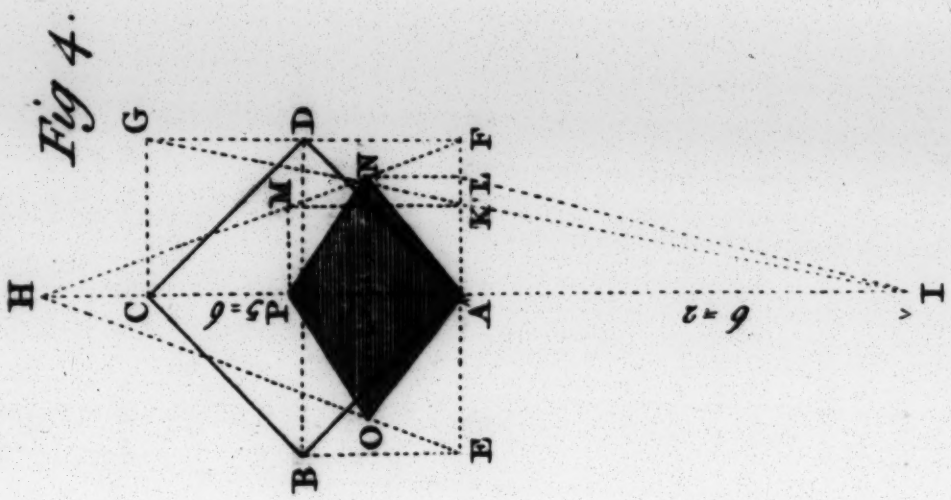
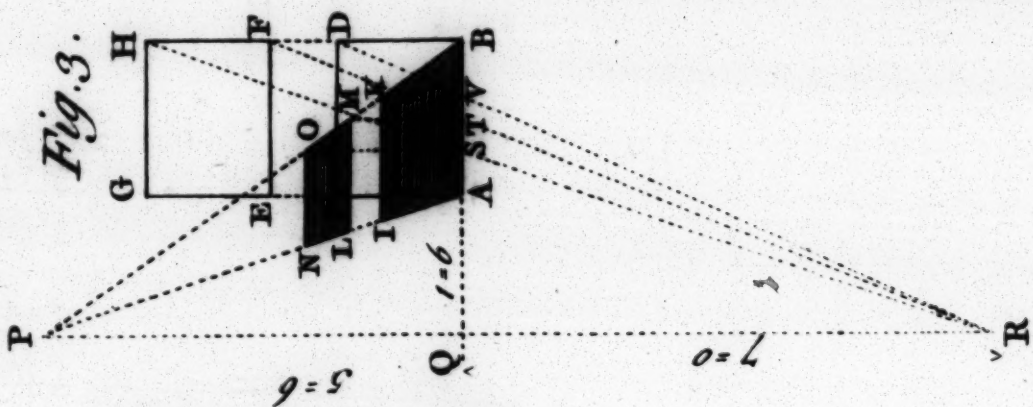
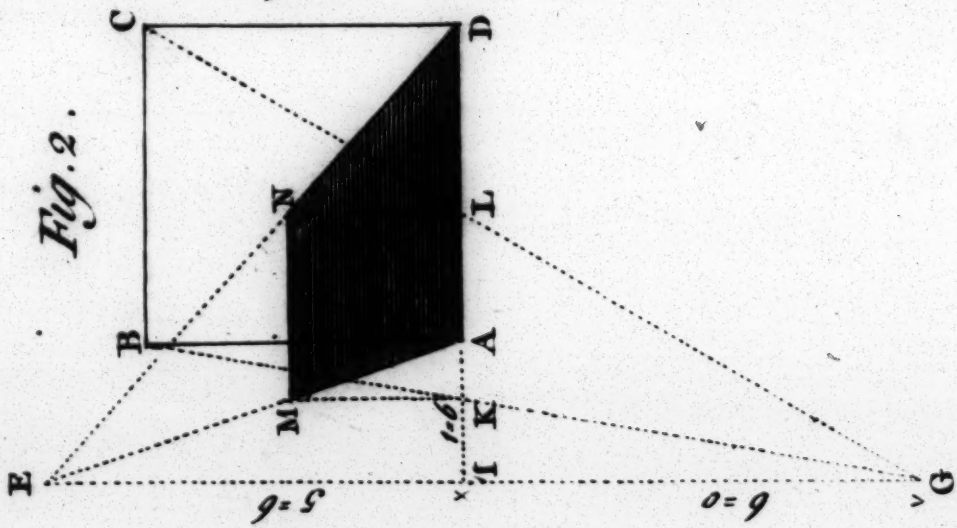
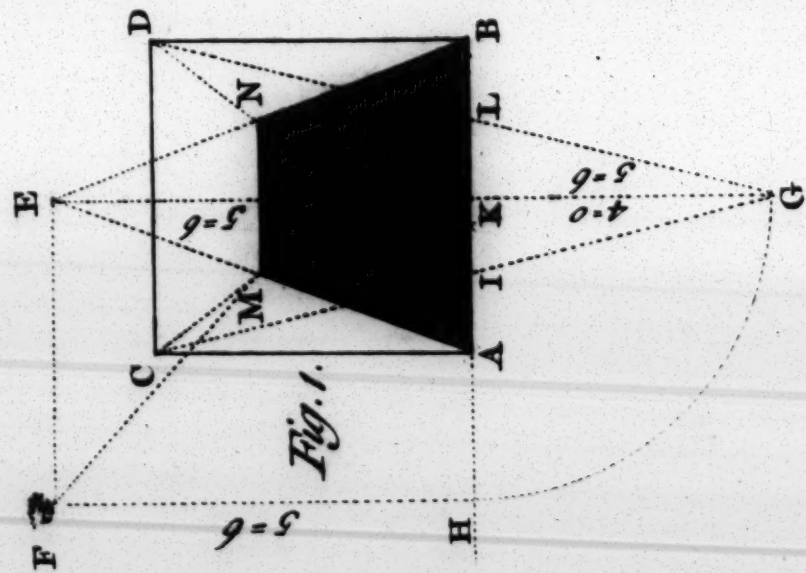
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PALLADIO'S Proportions in ARCHITECTURE, both in Geometrical and Linear Perspective; and several other Examples laid down as an Introduction to that Science.

See P L A T E I.

FIG. I. Contains most of the material Points and Lines in this Art, therefore is the Principal of the Whole, and must be well understood by all who intend to make a Progress in any Branch of Drawing. See the following Terms.

 H E Object A B C D is a geometrical square Plan.

G The Point of Distance, or Place where a Person stands to take the perspective Observation, whose Eye is supposed to be perpendicular over it.

F The Point of Sight, or Height of the Observer's Eye above the Object.

E The diminishing Point, horizontal, or level with the Point of Sight.

F E The horizontal Line.

G K The Line of Distance equal to K H or F E. All Lines from the Sight of F B are term'd occult Lines.

All Lines from the diminishing Point E are term'd diminishing Lines, and the Angles they produce, as A E B are diminishing Angles, and their Base as A B the ground Line.

See the Delineation of FIG. I. viewed through the Middle, at 4 Feet Distance, and the Eye 5 Feet 6 Inches above the Object.

The geometrical Plan A B C D being laid down, fix the Point of Distance G, at right Angles with A B, to cut the Middle of the Plan at K; extend the Ground-Line A B at Pleasure towards H, then from K strike the Arch G H, and raise the Perpendiculars H F and K E, equal to each other; draw F E, also E A and E B, then draw G C and G D, and where they cut the Ground-Line A B as at I and L; raise the Perpendiculars I M and L N, and draw M N; then is A M N B the true perspective Representation of the Plan A B C D.

Demonstration. A B C D is a geometrical, equal sided, square Plan, laid level on the Ground, and view'd 4 Feet from the front Line, in a middle Station as at the Point of Distance G, and the Point of Sight or Eyes Place is 5 Feet 6 Inches perpendicular over G, which is equal to H F or K E; because the Base Lines G C, and G D are level with the Face of the Plan A B C D. Perpendiculars raised from I and L, to cut the Lines E A and E B as at M and N, must give the true diminishing Side M N of the perspective Representation A M N B; and if the Angle A E B was raised perpendicular over A B, at right Angles with the Plan A B C D; and H brought to G as the Arch G H directs; and F raised perpendicular over G, at right Angles with G K; then occult Lines drawn from the Point of Sight F, to C and D, will cut the Lines E A and E B, at M and N, and the perspective Representation A M N B will cover the geometrical Plan A B C D from the Point of Sight.

B

Observe,



Observe, that no perpendicular Lines to a geometrical Plan, can be represented on one Plane, therefore the Point of Sight F is here described over H, whose proper Place is perpendicular over G, at right Angles with the Plan A B C D; and the Place of the diminishing Point E perpendicular over K, at right Angles with the same; for which Reason the Angle A E B, and Line H F, are supposed to be raised perpendicular, and H brought about to G; then will F be over G, and the horizontal Line F E over G K, which is the Place of every Line and Point in its natural Station.

N. B. The Point of Sight as F, with its occult Line F B, may be omitted in the Delineation of any Plan, as is shewed in the following Examples. I laid them down in FIG. I. for no other Use, than Demonstration; but in Elevations they are absolutely necessary, as is shewed hereafter in the Explanation to PLATE VIII.

For a farther Proof, See FIG. I. draw a square Plan on the Floor as A B C D, and fix the Point of Distance G, and strike Chalk-Lines on the Floor to represent G C and G D; then tack Nails in the Angles A B C D, and fasten Twine to A and B, and let a Person hold it up, or make it fast perpendicular over K, to represent the Angle A E B; then fasten other Twine to the Nails at C and D, and stand with your Eye perpendicular over the Point of Distance G, level with the Point of Dimension E, and strain the two Twines to your Eye, which represent occult Lines, and will cut the perpendicular Angle as at M N; from whence drop Plumb-Lines, and you'll find they will cut the Line A B as at I and L, which is a plain Demonstration of Truth.

FIG. II. Is an equal-sided square Plan, view'd oblique.

THE Plan A B C D being laid down, consider the Position and Distance from whence you propose to take your Observation, which in this Example is 1 Foot 6 Inches oblique, as A I, and 6 Feet Distance as I G. Continue the Ground-Line D A 1 Foot 6 Inches to I; then set on the Point of Distance G, 6 Feet from I, at right Angles with I D, and from I set up the diminishing Point E, 5 Feet 6 Inches, equal to the Height of the Eye; draw E A and E D, then is A E D the Angle of Dimension; from the Point of Distance G draw G B and G C, which cuts the Ground-Line I D at K and L, from whence raise Perpendiculars to touch the Lines E A and E D, as at M and N; draw M N, then is A M N D the true perspective Representation of

the Plan A B C D, view'd from the Point of Sight, perpendicular over the Point of Distance G.

FIG. III. Is two Parallelograms, or oblong, right Angle Plans, view'd oblique 1 Foot 6 Inches, as A Q, and 7 Feet Distance, as Q R, and the Eye 5 Feet 6 Inches above the Ground-Line, as Q P.

Continue B A to Q, and fix the Point of Distance R, and Point of Diminution P, as before directed; and draw the Lines P A and P B then from the Point of Distance R, draw Lines to H F and D, which cuts the Ground-Line Q B at S T and V, from whence raise Perpendiculars to touch the Line P B at O M and K; draw the Lines O N M L and K I parallel to A B; then is A B I K and L M N O, the true perspective Representation of the Plans A B C D and E F G H.

FIG. IV. Is a geometrical square Plan, view'd cross the Angle, at 6 Feet 2 Inches Distance, as A I, and the Eye 5 Feet 6 Inches above the Front of the Plan or Ground-Line, as A H.

THE Lines of this Object being no wise parallel or perpendicular to the Ground-Line, observe these Remarks.

All angular Points, as B C D, must correspond with the Ground-Line by Perpendiculars, because it is from thence all their perspective Measures are taken.

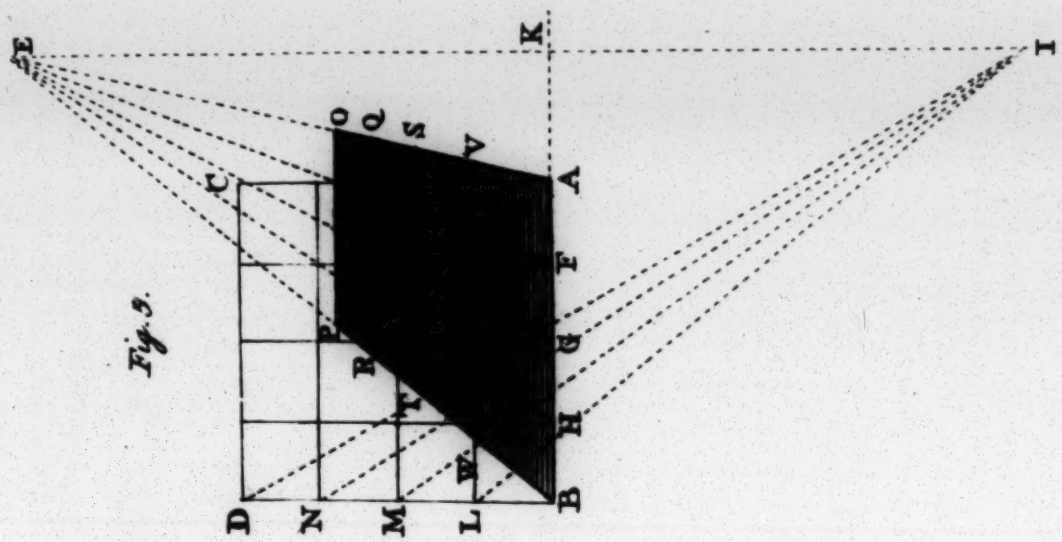
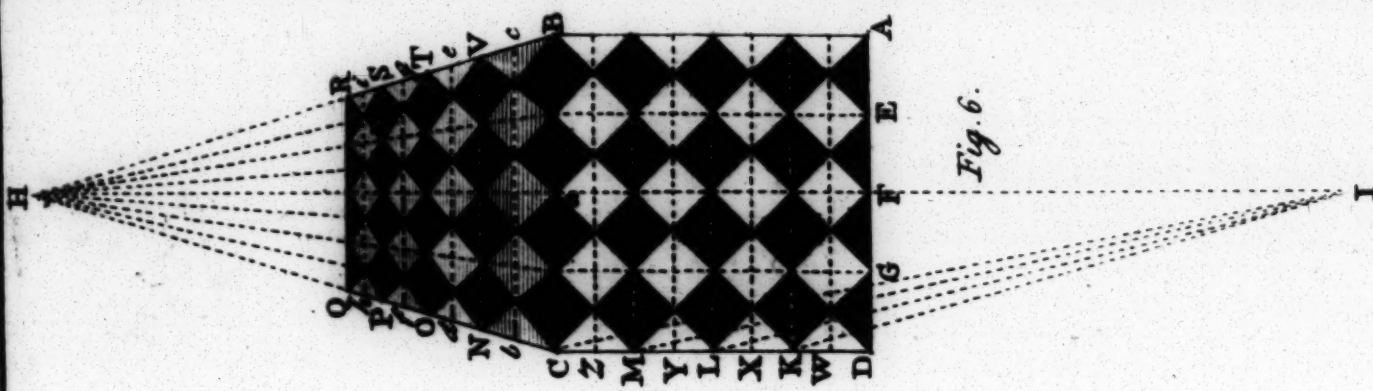
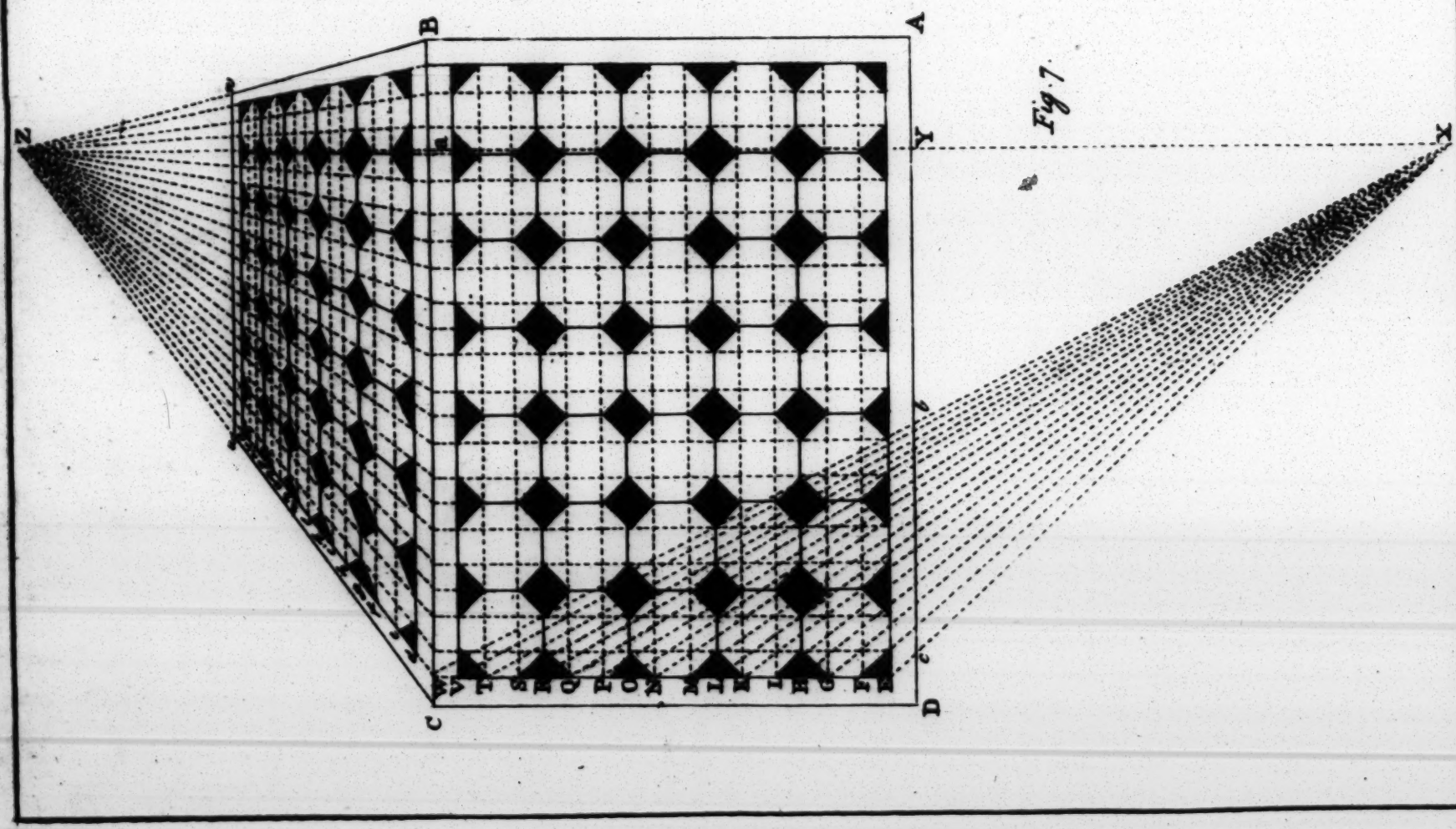
Again, as the Depth of this Object A C determines in one Line, with the Point of Distance, which affords no Angle; therefore, the perspective Depth A P can't be found without an horizontal Line, as C G, from whence a Line is drawn to the Point of Distance I, which cuts the Ground-Line at K, and a Perpendicular from thence to touch the Line H F at M; from whence an horizontal Line to the Line C A, gives the Point P.

To proceed, the Plan A B C D being formed, draw the Ground Line E F equal and parallel to B D; then set on the Point of Distance I, and Point of Diminution H, and drop Perpendiculars from B to E, and from D to F; and draw the Lines H E, and H F; then set off C to G perpendicular over D F, from whence draw the Lines G I and D I, which cuts the Ground-Line at K and L, from whence raise Perpendiculars to touch the Line H F at M and N; then from M draw an horizontal Line to cut A H at P, and from N the Line N O, to cut E H at o; then is A o P N the perspective Representation of A B C D.

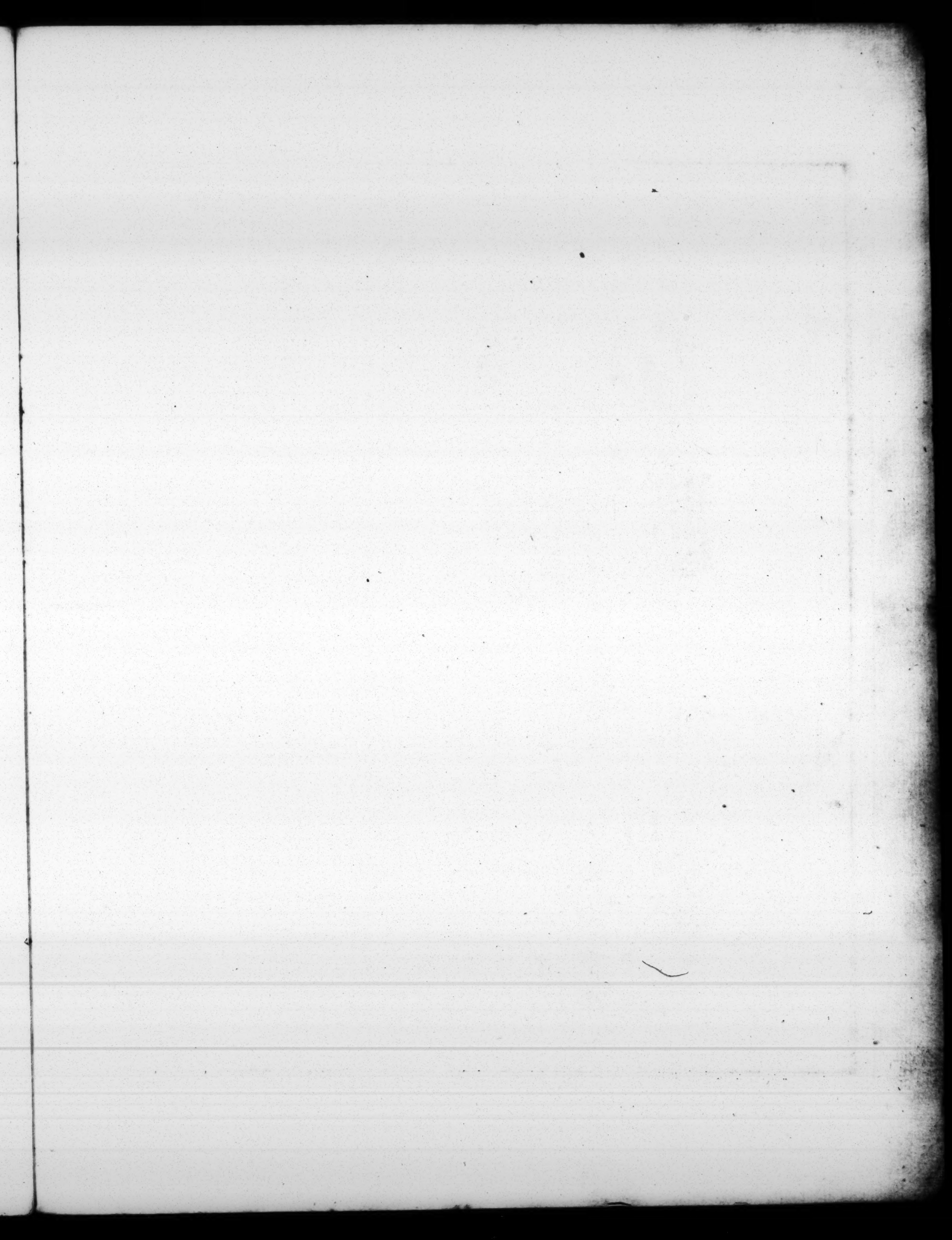














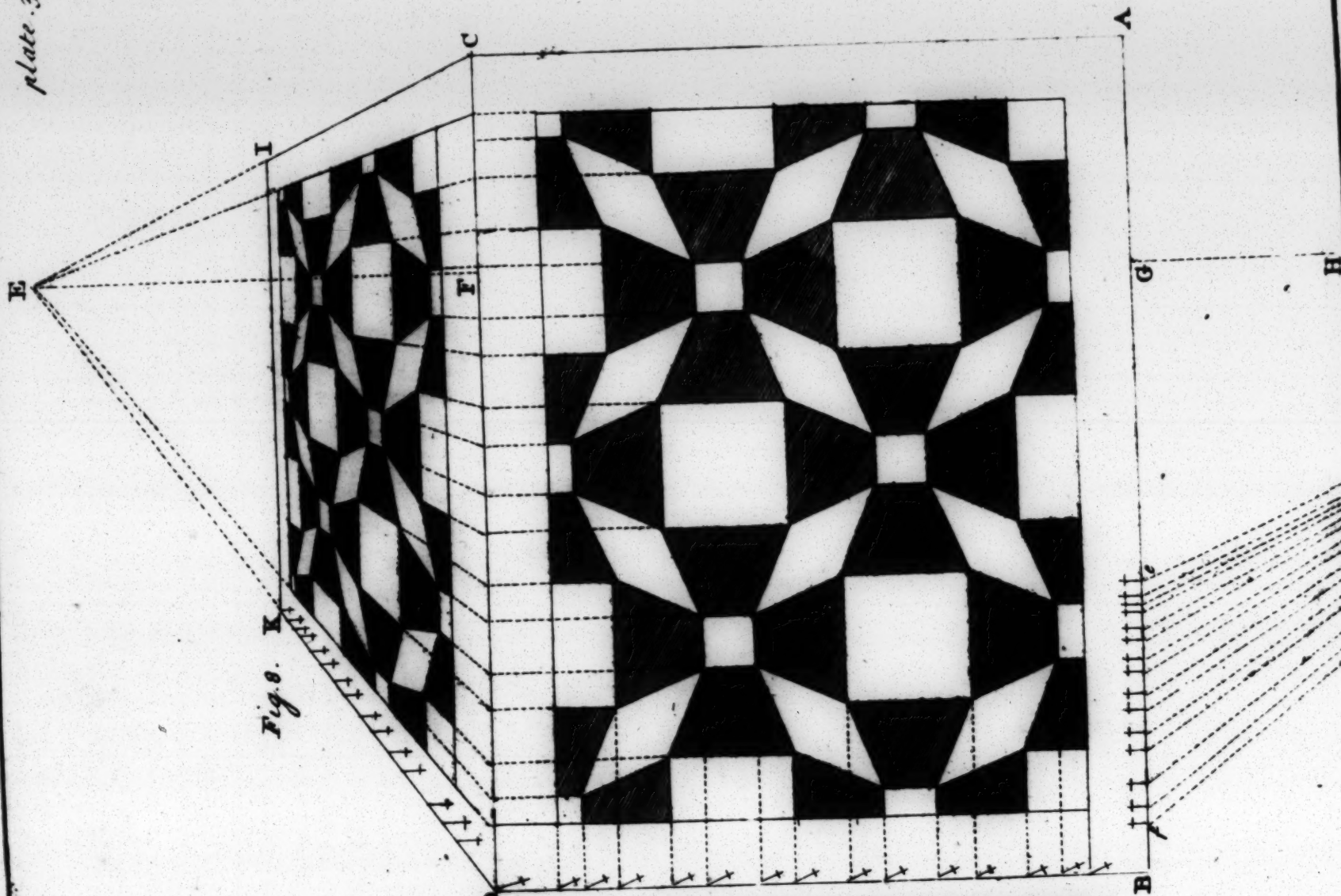


Fig. 8. K.

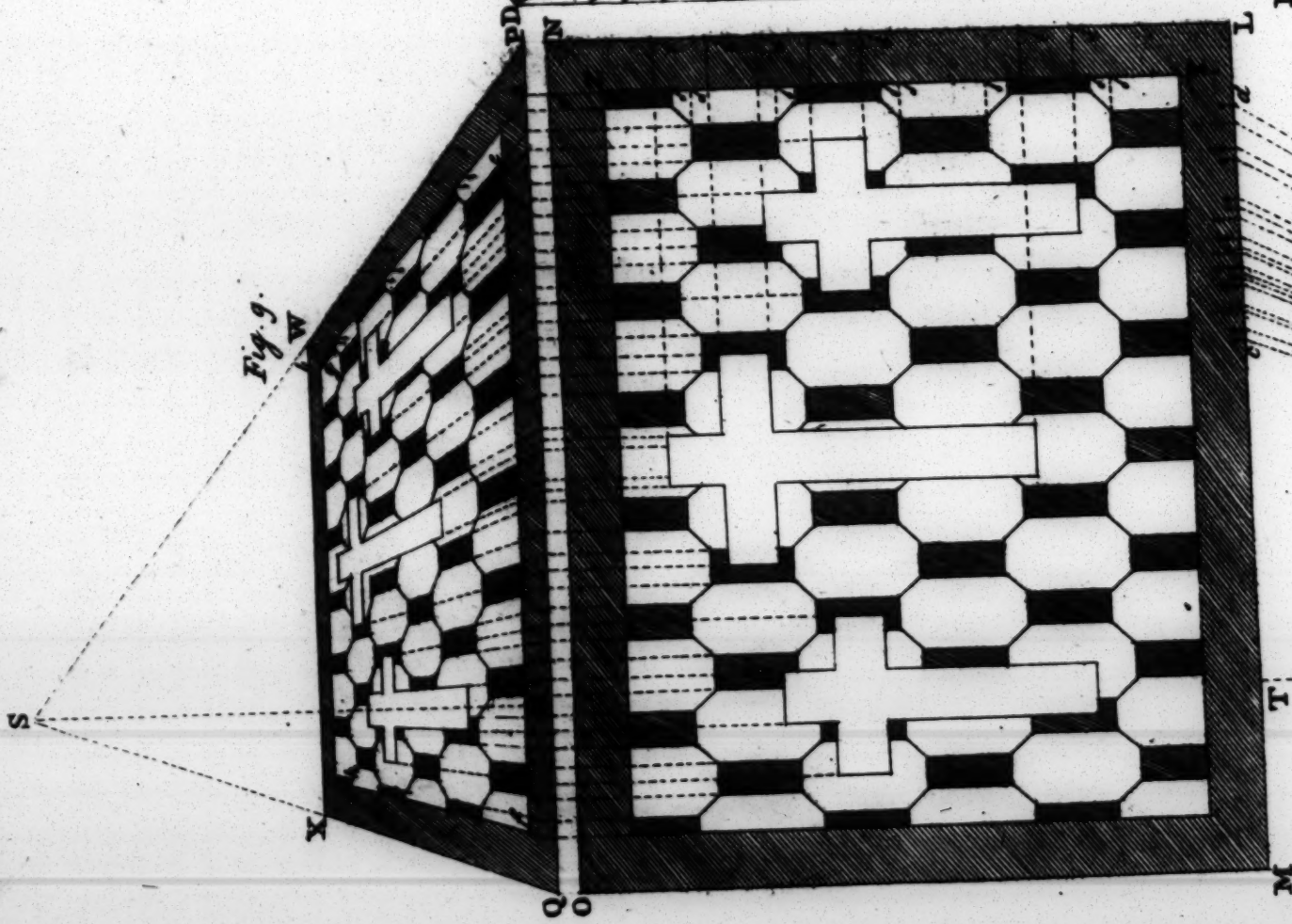


Fig. 9. W.



## See P L A T E II.

FIG. V. Represents a Pavement of geometrical Squares, view'd oblique.

THE Plan, or Pavement A B C D being drawn, continue the Ground-Line B A to K, then fix the Point of Distance I, and Point of Diminution E; draw Lines from E to A F G H and B; then from I to L M N D, and where they cut the Ground-Line K B, raise Perpendiculars to touch the Line E B, as at W T R P; draw the Lines W V, T S, Q R, and P O, parallel to A B; then is A O P B the perspective Representation of A C D B.

FIG. VI. Represents a Piece of Diamond Pavement, viewed through the Middle.

First, Observe, as the following Examples are full of Work, which will cause too much Perplexity to draw the Perspective Part on the Geometrical Plan, therefore I suppose A D, and B C, to be one and the same Ground-Line, being parallel and equal to each other, and corresponds by perpendicular Lines with the same, but take care to measure the Point of Distance from the one, and the Point of Diminution from the other, which will cause no Difference in the Perspective Part of the Work.

A B C D being drawn from F, set on the Point of Distance I, and from A B C D being drawn from F set on the Point of Distance I, and from a, set up the Point of Diminution H, then from all the dotted Lines which cut the Line B C, draw Lines to H; again draw Lines from I to W K X L Y M Z C, and where they cut the Line A D raise Perpendiculars to touch the Line H C, at b N d O f P h Q; then draw the Lines b c, N V, d e, O T, f g, P S, h i, and Q R, parallel to B C, and from the Intersections of those Lines, draw the several Diamonds, then is B R Q C the Perspective Representation of A B C D.

FIG. VII. Represents an Octagon dotted Pavement viewed oblique.

The Geometrical Pavement A B C D, with the dotted Lines being drawn from Y, set the Point of Distance X, and from a, the Point of Diminution z, then from all the dotted Lines which cut B C, draw Lines to z, again draw Lines from the Point of Distance X to E F G H I K L M N O P Q R S T V W, and where they cut the Line A D, as between b c, raise Perpendiculars to touch the Line Z W, at d e f g h i k l m n o p q r s t, from whence draw dotted Lines parallel to B C, as in the Example, to

find the angle u, draw a Line from X to C, and where it cuts the Line A D, raise a Perpendicular to touch the Line Z C at u, draw u w, and from the Intersections of those Lines, draw the small Squares, or Dots, then is B w u C the Perspective Representation of A B C D.

## See P L A T E III.

FIG. VIII. Represents a modern Piece of Pavement, viewed oblique. Observe the following Remarks.

TO prevent Perplexity of Lines, I make use of two Marks as in the following Figure; the longest I term Darts, and the shortest Spikes, those on the Line B D tend to those between f e and the Point of Distance; and those on the Line D E hang perpendicular over those between f e; from whence the several Perspective Depths are given, as by the dotted Line in the Example.

The Geometrical Part of the Example being drawn in a large Scale, to shew its perspective Representation more plain, causes the Point of Distance to extend beyond the Bounds of this Plate, which is no Hindrance to the coming at the true Knowledge of the Work; because it's Place is known by the meeting of the Line G H, with those from the Darts f e, on the Line A B.

The Object A B C D being drawn, set on the Point of Distance from G, towards H; and the Point of Diminution from F to E, then from all the Extream Points on the Line C D, draw Lines to E; again from the Extreams on the Line B D (denoted by Darts) draw Lines to the Point of Distance, which cut A B at the Darts e f, from whence raise Perpendiculars to the Line K D, which are denoted by Darts, and are the extream Points of Lines, to be drawn parallel to C D, whose Intersections limit the Shape of every Perspective Figure; but Care must be taken in drawing their several Sides, which may be done by keeping an Eye on the Geometrical Draught.

FIG. IX. Represents the Floor of an Antient Chapel, view'd oblique.

First, Observe, the dotted Lines from the Crosses are carried to the Line L N, and their Extreams denoted by Darts; and those from the other Pavement to the Line Y Z, whose Extreams are denoted by Spikes.

The Object L N O M being laid down, measure the Point of Distance from T towards V; and the Point of Diminution from R to S, but observe there is a Space between the Lines N O, and P Q, which makes no Difference in the Work, because they are equal, parallel, and perpendicular to each other, and the Ground



Ground-Line  $LM$ , therefore Perpendiculars from the Geometrical Plan being raised to  $PQ$ , make it the Ground-Line for the Perspective Representation, as  $CD$  is to that of Figure 8.

To avoid Perplexity, draw the Out-line  $PWXQ$ , and three Crosses, before the other Part of the Pavement, whose Lines are denoted by Darts; first draw  $PS$ , and  $QS$ , then a Line to the Point of Distance, which cuts the Line  $LM$  at the outward Dart next  $C$ , from whence raise a Perpendicular to cut the Line  $PS$ , at  $W$ ; draw  $WX$ , and raise Perpendiculars from the three Crosses, to the Line  $PQ$ , from thence draw Lines to  $S$ ; then from the several Angles of the Crosses, draw Horizontal Lines to the Line  $LN$ , which are denoted by Darts, and from thence Lines to the Point of Distance, which cuts the Ground-Line  $LM$ , denoted by Darts, from whence raise Perpendiculars to the Lines  $PW$  denoted by Darts, from whence horizontal Lines give the Lengths of the three Crosses.

The Out-line, and three Crosses being described, raise Perpendiculars from the Pavement to the Lines  $PQ$ , from whence draw Lines to  $S$ ; then from the cross Joins of the Pavement draw horizontal Lines, to the Lines  $ZY$ , denoted by Spikes, from whence draw Lines to the Point of Distance, which cut the Ground-Line  $LM$  denoted by Spikes, from whence raise Perpendiculars to the  $Qb$  denoted by Spikes; from whence draw the Lines  $ef$  and  $gh$ , and the cross Lines of the Pavement.

#### See P L A T E IV.

FIG. X. Represents the geometrical and perspective Plans of a Pavement, view'd oblique.

Suppose the geometrical Draught  $ABCD$  to be finished, and the perspective Representation  $ENOF$  be required, draw the Line  $EF$  equal and parallel to  $CD$ , to which raise all the Perpendiculars of the Plan; then fix the oblique Position, as at  $I$ , from whence measure the intended Point of Distance towards  $K$ , and perpendicular over  $I$ ; raise the Point of Diminution  $G$ , to which draw Lines from  $EF$ , and all the determined Lines joining thereto; then from the Darts at the Determination of the horizontal Lines, on the Lines  $AC$ ; draw Lines to the Point of Distance, which cuts the Lines  $AB$  at the several Darts, from whence raise Perpendiculars to the Line  $EG$ , denoted by Darts; from whence draw  $NO$ , and all the cross Lines of the perspective Pavement, by whose Intersections describe the several Shapes, in which have a careful Eye on the geometrical Plan.

FIG. XI. Represents a Pavement, view'd from the same Point of Sight, and Diminution, as FIG. X.

with this Difference only, the perspective Plan  $PRSQ$ , joins with its Original  $MLPQ$ .

#### See P L A T E V.

FIGURES XII. and XIII. Represent Pavements, view'd at middle Stations.

THEIR Points of Distance are measured from  $I$  towards  $K$ , and from  $W$  towards  $X$ ; and their Points of Diminution from  $H$  to  $G$ , and from  $V$  to  $T$ ;  $EF$  is equal and parallel to  $CD$ ; also  $RS$  to  $PQ$ , the Darts on the same Line  $AB$  is created by those on the Line  $AC$ , and the Point of Distance; (See the Lines  $Aa$ ) also, those on the Line  $NO$ , by the Darts on the Line  $OQ$ ; and the Point of Distance; (See the Lines  $O b$ ) again, the Darts on the Lines  $EL$ , are perpendicular over those between  $Aa$ ; and Darts on the Lines  $SZ$  are perpendicular over those between  $bO$ , and the Lines proceeding from them are parallel with  $LM$  and  $YZ$ ; these being drawn by the same Rule as the foregoing Examples, there needs no farther Explanation.

#### See P L A T E VI.

FIG. XIV. Shews an-antient Piece of inlaid Flooring, representing Squares, Octogons, Circles, Dove-tails, Spiders, &c. view'd from a middle Station.

AS  $CDHI$ , the perspective Representation of the geometrical Plan  $ABCD$ , is found by the same Rule as the foregoing Plans, there needs no farther Explanation, only remember the Point of Distance is measured from  $E$  towards  $F$ , and the Point of Diminution from  $K$  to  $G$ .

FIG. XV. Represents a Piece of Pavement, view'd oblique, which needs no farther Explanation, than what has been hitherto said; because  $OTVP$ , the perspective Representation of the geometrical Draught  $LOPM$ , is found by the same Rule as the foregoing; also the Point of Distance from  $Q$  towards  $R$ , and the Point of Diminution from  $W$  to  $S$  is measured in the same Manner.

#### See P L A T E VII.

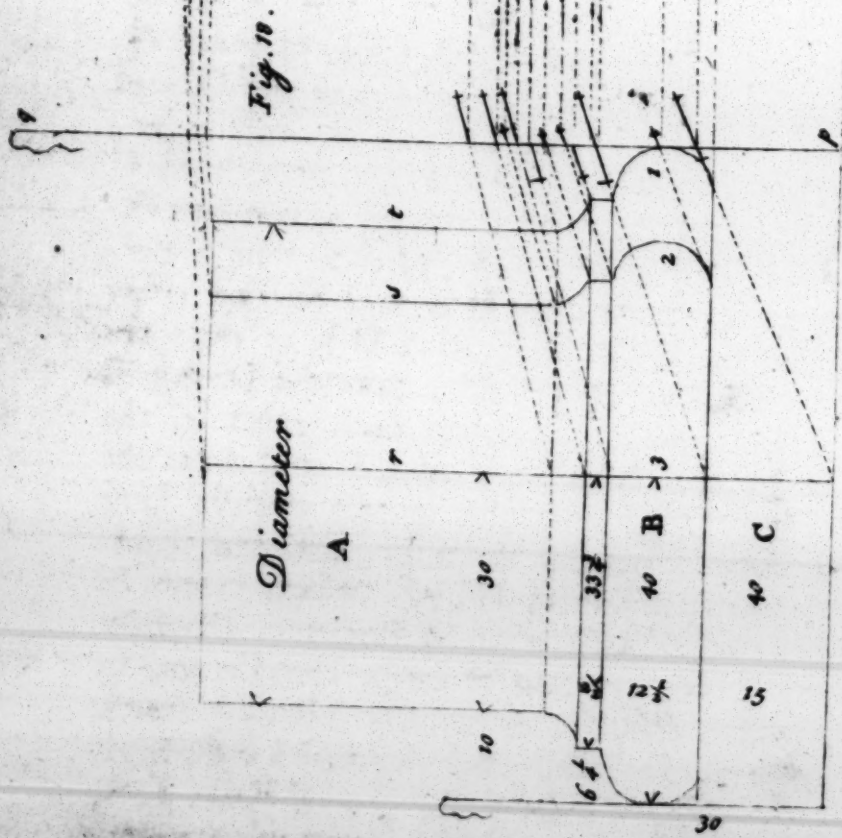
FIG. XVI. Represents a modern Piece of Pavement, composed of Hexigons, Parallelograms, Diamonds, &c. view'd oblique.

THE geometrical Design  $ABCD$  being laid down, continue the Ground-Lines  $AB$  at Pleasure

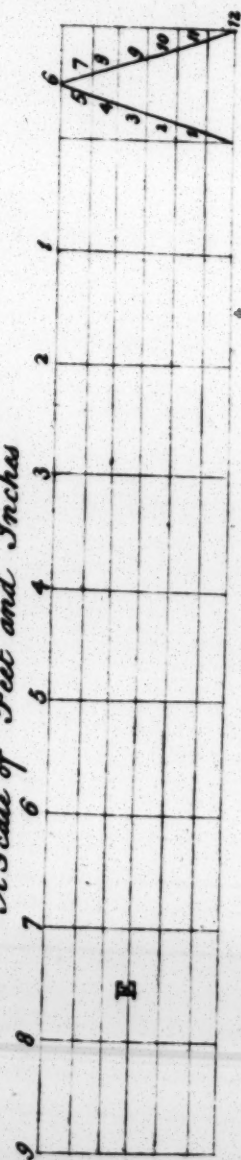


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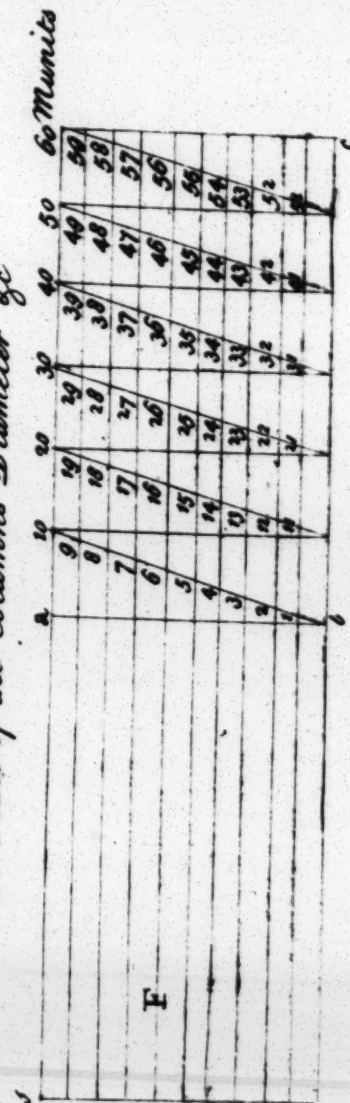




A Scale of Feet and Inches



A Scale of the Columns Diameter &c



Diameter

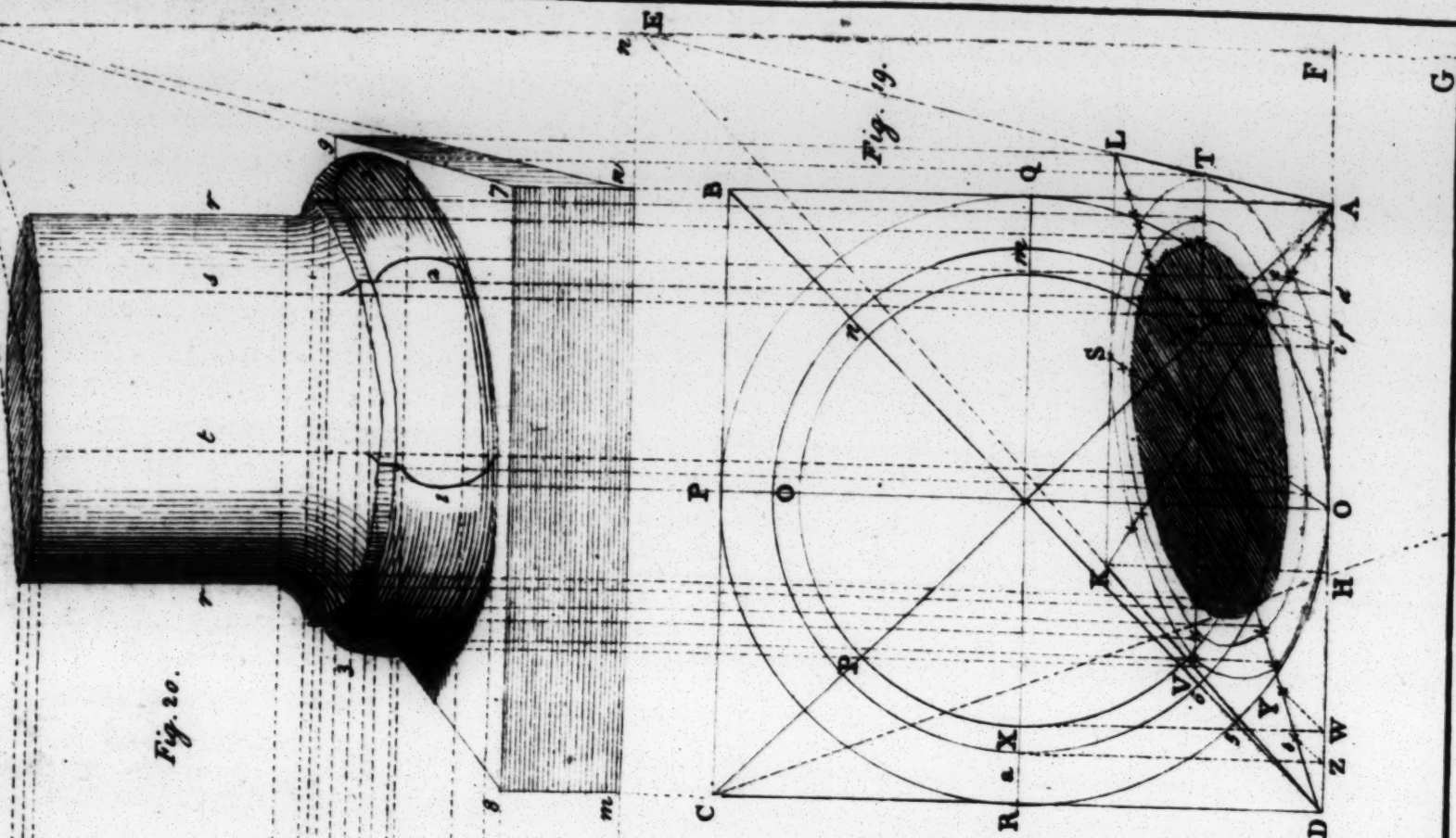
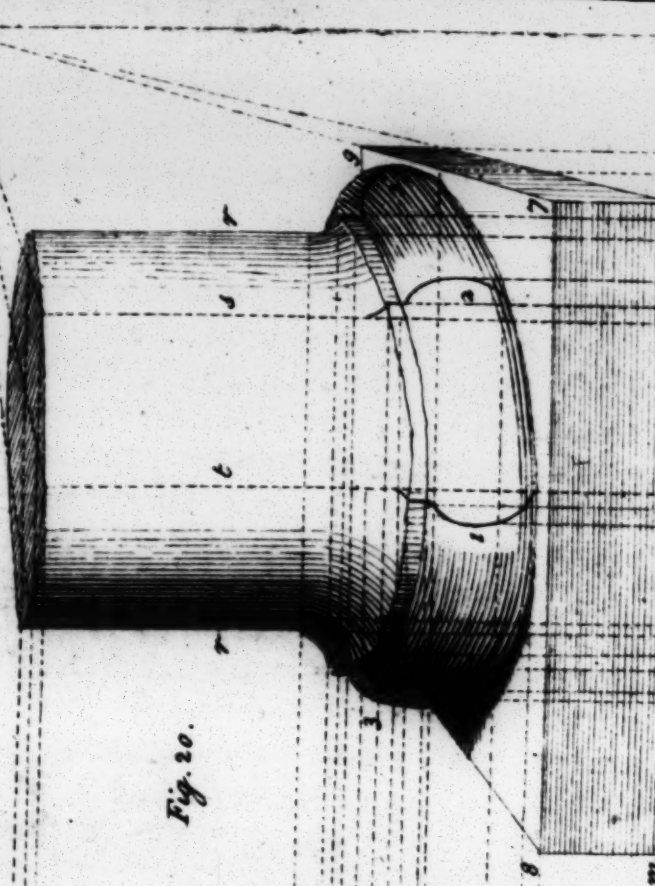


Fig. 20.





sure to E; also, F G to H, then measure the Point of Distance from L towards M, and the Point of Diminution from I to K, and draw Lines from all the extream Points on the Lines F G to-K; then from the Extreams on the Line A C, (See the Darts) draw Lines to the Point of Distance to touch the Lines A B, denoted by Darts, from whence by Perpendiculars to the Line F N (denoted by Darts) draw N O parallel to F G, and all other Lines from the several Darts, from whose Intersection describe the perspective Figures of the Pavement.

FIG. XVII. Represents an inlaid Floor or Pavement, view'd at a middle Station.

**T**HE geometrical Draught P Q R S being drawn, the perspective Representation a b T V is found by the foregoing Rules; also, the Point of Distance from Y towards Z, and the Point of Diminution from X to W, which needs no farther Explanation.

*Of the five Orders of Columns, with their Pedestals, Intablatures, and Imposts of Arches.*

### See P L A T E VIII.

FIG. XVIII. Represents the Base of the Tuscan Column, with its Measures, both Heights and Projections in Minutes. (See the Terms.)

**A**, The Diameter of the Column below, from whence all the Measures are taken; it being divided into sixty Parts, called Minutes, by Help of the diagonal Scale F.

B, Torus 12 Minutes and an Half high, and projects 6 one Fourth; C, Plinth 15 Minutes high, and projects 10 from the Shaft or Body of the Column. These two Members, with the Fillet above the Torus, contains 30 Minutes, or half a Diameter.

Observe the Projections; the Plinth, which is the greatest, is set on first, and a perpendicular Line raised, from whence all the Measures are laid down; but they may be set off from a middle Line. (See the Example) Half the Diameter is 30 Minutes.

The Fillet 33 three Fourths.

The Torus 40.

The Plinth, ditto; which answers the same Purpose. However, I shall use both Methods, where I find it convenient.

#### *Of the Scales E and F.*

Scales of Feet and Inches as E, should be fix'd to all Draughts, in Order to take off the several Measures; the six small Spaces upwards may be of any

Width, but the perpendicular Spaces must be confined to the intended Size; the Use of the Diagonal is as follows: If one Fourth of an Inch is wanting, set the Point of the Compasses up the Diagonal, one Fourth of a Space; if half an Inch, set up half the Space; if three Fourths of an Inch, set up three Fourths of a Space. Again, 4 Feet 3 Inches is wanted, set one Foot of the Compasses at 3 on the Diagonal, and the other on the same Line under 4 Feet: Again, if 5 Feet 8 Inches and a Half is wanted, set one Foot of the Compasses to the Dot on the Diagonal, between 8 and 9, and the other on the Dot under 5 Feet, and so of other Parts.

The diagonal Scale of the Minutes F is made, by making 10 equal Divisions upwards, of any convenient Width; but the perpendicular Widths are confined to the intended Size of the Columns Diameter; for Example, e b is equal to the Diameter of the Column at A, and is divided into 6 equal Parts by perpendicular Lines and Diagonals, drawn as in the Example; if any Number of Minutes is wanted, suppose 36, set one Foot of the Compasses on 36 of the Diagonal, and the other on the same horizontal Line, at a b, and so of any Number of Minutes: When Parts of Minutes are wanted, observe the Method to scale E.

#### *Of the perspective Representation.*

It is to be observed, the perspective Plan must be found, from whence (by perpendicular Lines) all the Projections of the Elevation is given. See FIGURES XIX and XX, whose View is taken in an oblique Position.

First, Lay down the geometrical Plan A B C D, with its Circles equal to the several Projections of the geometrical Elevation, FIG. XVIII. Then draw the Diagonals A C - D B, and middle Lines O P - R Q.

The Points of Distance, as from F towards G, and Diminution E being fix'd, proceed to find the perspective Plan; draw E A and E D, then from C draw a Line to the Point of Distance, which cuts the Ground-Line D F at H, from whence raise a Perpendicular to touch the Line D E as at K, and draw K L parallel to D A; then is A D K L the perspective Out-line of the Plinth; draw the Diagonals A K and D L, which intersects each other in the Middle at I; then lay a Rule on E I, and draw the middle Line O S, and the reverse middle Line T V through I, parallel to A D; the next Lines wanted is the perspective Curves, which cannot be found by any other Rule, than by Points or Divisions on streight Lines, cutting through the Center, by Help of which they are drawn by Hand. See the little Crosses on the middle and diagonal Lines, begin with the former, and observe this general Rule. From a X drop Perpendiculars to z W, from whence draw

C

Lines



Lines to E, which gives the Divisions on the middle Line at V; from the same Diminution-Lines leave Marks on the Diagonal as at b Y, and transfer them to the middle Line at O; and Diagonal at A, parallel to A D; then from the Marks on the Diagonal at A, draw Lines to E, which gives the true Divisions, or Points on the middle Line at T, also those on the Diagonal at L, which last transfer to the middle Line at S, parallel to L K. These are the perspective Divisions of the Base on the middle Lines  $OS = TV$ , because they are taken from the middle Line of the geometrical Plan at R X, therefore the Points on the Diagonals, as by b Y, &c. are of no farther Use; the Divisions of the Base on those Lines being not yet found, proceed as follows; from the diagonal Division c g k on the geometrical Plan, drop Perpendiculars to i f d, from whence draw Lines to E, which gives the Division e h l on the Diagonal at A; and L, which transfer to those at D and K, parallel to A D, and L K; then are the Divisions at T L S K V, &c. The fine perspective Points of those at m n o p x, &c. which make eight Places of Divisions enough to guide the Hand of any one in the drawing the several Curves.

#### *Of the Elevations.*

See the following Observations, FIG. 20, is draw'd in the same oblique Position, Distance, and Diminution as its Plan, FIG. 19, the oblique Extents A F and w n equal; the Height of the diminishing Points F E, and n o equal; and the Length of the Line of Distance F G, when extended to meet the Line C H, is equal to the Line of Distance n p.

The geometrical Elevation, and Front of its perspective Representation, ranges in one Line, because the Base A D, of the diminishing Angle A D E, stands on the front Line of the geometrical Plan, that Angle being the Place of Conception for the perspective Representation between the Eye and Object, as the Glass of a Telescope, or any other Instrument, whereon a perspective View is taken, which is demonstrated by the perpendicular Line p q, FIG. 18. This Line is the Profile of the diminishing Angle, as D E A raised perpendicular, whose Office is to shew the several Heights at the intended Place, between the Eye and the Object; see the Darts, and Spikes from whence the several Heights are conveyed by horizontal Lines to intersect Perpendiculars raised from the Plan, whose Meeting creates the several perspective Measures.

This being an Elevation, the Point of Sight and occult Lines are here used, and fully demonstrate, as was before hinted; and observe, the Eye at o, FIG. 20, is both Point of Sight and Diminution, which is no general Rule, as will be shewn hereafter; but note, that all Lines from o to the perspective Draught, FIG. 20, are diminishing Lines, and all Lines from o to

the geometrical Elevation, FIG. 18, are occult Lines. But before I proceed with the Work, I shall shew, as plain as I can, the Reasons for the Lines and Curves  $ts = s2$  and  $r3$  (FIG. 18.) and the Measures from whence they are taken. First see the geometrical Plan, which is divided into eight Parts, or Places of Projection, by diagonal and middle Lines; then view the Column on any Side, but stand on the same Horizon with the Base, five of which will discover themselves, and be a sufficient Guide to any reasonable Draughtsman in striking the several Curves.

From the Divisions at p p, FIG. 19, as in the Example, draw Lines to the Side C B, as at q r s, then set r s, FIG. 18, equal to P q, and the Fillet :: equal to P r: and the Torns 3 2, equal to P s: then draw the Line and Curve s 2, which is the true Projection, as it appears, geometrically, on the Angle; the Line r 3 is in the Middle; and the Line and Curve t 1 is the common Projection.

See the practical Method in the Delineation of FIG. 20.

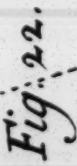
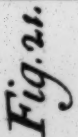
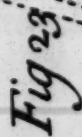
The Plans and Elevation, FIG. 18 and 19, with the Point of Sight o, and perpendicular Line p q, with the Ground-Line p n, being laid down, proceed in the following Manner; first describe the Front of the Plinth m 8 7 w, by Perpendiculars from A D, and a horizontal Line from the Top of the Plinth, FIG. 18; then from the Divisions on the middle Lines of the Plan as at T V, raise Perpendiculars at Pleasure, and from the middle Line r 3, FIG. 18, draw occult Lines to touch the Line p q (see the Darts) which convey by horizontal Lines to the Perpendiculars raised from the Plan, whose Intersection gives the Heights and Projections of the Out-lines  $r3 = r3$ , FIG. 20, which describe as in the Example; and to prevent Confusion, rub off their perpendicular, occult, and horizontal Lines; then from the Divisions on the Diagonals of the Plan, as at Y = l h e, raise Perpendiculars at Pleasure, and from the Line and Projections s 2, FIG. 18, draw occult Lines to touch the Line p q, denoted by Spikes, which convey by horizontal Lines to the Perpendiculars last drawn, whose Intersections gives the Heights, and Projections of the Lines and Curves  $s2 = s2$ , FIG. 20, which describe as in the Example; and for the Reason before-mentioned, rub off their perpendicular, occult, and horizontal Lines, then from the Divisions of the Plan at O, raise Perpendiculars at Pleasure; and from the Line and Projections t 1, FIG. 18, draw occult Lines to touch the Line p q, denoted by Darts to the Right, which convey by horizontal Lines to the Perpendiculars last drawn, whose Intersections gives the Heights and Projections of the Lines, and Curves t 1, FIG. 20, which describe as in the Example. The five Lines and Curves being thus







Plate. 9.



*A Scale of Feet and Inches.*



thus laid down, describe the Curves of the Base and Top by Hand; so done, draw diminishing Lines from  $8 = 7$  and  $w$ ; and from the Plan at  $L$ , raise a perpendicular to  $9$ , which gives the diminishing Extent of the Plinth, then draw the upper Line at  $9$ , parallel to  $78$ , and the Work is finished.

## See P L A T E IX.

FIG. XXI. Is the geometrical Capital of the Tuscan Column, with all its Members, minuted both from a Middle and Plumb-Line of Projection. See the Terms.

**A**, Abacus.  
**B**, Ovolo.

**C**, Collar.

**D**, Astragal.

**E**, Shaft of the Column.

*Of the perspective Representation.* See FIG. 22.

The geometrical Plan  $A B C D$  shews the several Widths and Projections of FIG. 21, by which the perspective Plan is found; but first observe the Ground-Line  $E F$  is placed distant from the Plan, as  $A G$  and  $B H$ ; therefore the Plumb-Line  $c d$  must be equal distant as  $q r$  to  $A G$  or  $B H$ ; because the one is the Base to the Angle of Diminution, and the other the Profile, as was shewed in the Explanation of the foregoing Plate.

The geometrical Plan with its Circles, diagonal and middle Lines being laid down, proceed to find its perspective Representation from the intended Point of Distance, which in this Example is oblique, as  $G E$ .

Draw the Ground-Line  $E F$ , at the intended Distance from the geometrical Plan, of a Length at Pleasure, and drop the Perpendiculars  $A G = a L$  and  $B H$ ; then from  $G$  set on the oblique Position to  $E$ , from whence set up the Point of Diminution  $I$ , perpendicular to  $E F$ ; and from  $E$  towards  $K$  set on the Point of Distance, which must be equal to  $I p$ ; then describe the Angle of Diminution  $G I H$ , and draw a Line from  $D$  to the Point of Distance, which cuts the Ground-Line at  $M$ , from whence raise a Perpendicular to touch the Line  $I H$  at  $P$ ; and draw  $P Q$  parallel to the Ground-Line. Again, draw a Line from  $B$  to the Point of Distance, which cuts the Ground-Line at  $W$ , from whence raise a Perpendicular to touch the Line  $I H$  at  $O$ , and draw  $O N$  parallel to the Ground-Line, then draw the diagonal and middle Lines  $N P = O Q = T V$  and  $R S$ , on which set the Divisions for the Circles of Projections to represent those of the geometrical Plan mark'd 1, 2, 3, 4, 5, 6, 7, 8, but begin with the Marks on the middle Lines  $T V$  and  $R S$ .

Drop Perpendiculars from 7 to  $W$ , from whence by a Rule on  $I$ , set Marks on  $O S P$ , and convey those at  $O$  parallel with the Out-lines to  $V$  and  $N$ ,

and those at  $P$  to  $T$ ; then by a Rule on the Divisions at  $N$ , and the Point of Diminution  $I$ , set the Divisions at  $R$ ; now the Divisions on the Angles, as at  $N O P$ , may be rubbed off, they being of no other Use, than to convey the several Divisions to the middle Lines.

Again, to find the Divisions for the Diagonals at  $N P O Q$ , drop Perpendiculars from the Divisions of the geometrical Plan at 2 to  $t$ , from whence by a Rule on  $I$ , mark the Divisions at  $N$  and  $Q$ , as  $x$ , &c. then convey those at  $x$  to  $y$ , parallel to  $N O$ ; and those on the Diagonal at  $Q$  to the Line at  $P$ , parallel to  $Q P$ . The eight Places of Divisions being laid down, describe the Circles of Projection by Hand, and the perspective Plan is finished.

### *Of the perspective Elevation.*

First, Observe the Curves and Lines of Projection,  $e f g$ , FIG. 21; those at  $e$  is the real geometrical Projection, as  $w z$ , &c. and those at  $f$  are taken from 9, and 10 proceeding from 6, because the Projections on the Diagonal at 6 appears in Front, as those between 9 = 10, therefore  $b g$ , with its Projection, is equal to  $g f$  and its Projection; the middle Line  $g$  represents a Perpendicular over  $Y$  or  $Z$ , whose Projections are at right Angles with the Line of Distance,  $I P$ .

Proceed to lay down FIG. 23; from the Division of the Plan at  $V$  raise Perpendiculars at Pleasure towards  $k$ ; then from the several Projections at  $e$ , draw occult Lines to touch the Line  $c d$  as denoted by Spikes, which convey by horizontal Lines, to meet the Perpendiculars at  $k$ , whose Intersections gives the several Heights and Projections of the Mouldings, &c. which describe by Hand, as the dotted Lines directs, and rub off those occult and horizontal Lines, they having performed their Office; then from the Divisions of the Plan on the Diagonals at  $x$  and  $y$ , raise Perpendiculars at Pleasure, as to  $i$  and  $l$ , and from the several Mouldings  $f$ , draw occult Lines to touch the Line  $c d$ , as denoted by Darts, which convey by horizontal Lines to meet the Perpendiculars at  $i$  and  $l$ , whose Intersections give the Heights and Projections of the Mouldings in those Parts of the Capital, which describe by Hand as by the dotted Lines; then rub off the last occult and horizontal Lines, as before hinted, and raise Perpendiculars at Pleasure, from the several Divisions  $R$  and  $S$ , to hand  $m$ , and draw occult Lines from all the Divisions of the Line  $g$ , to touch the Line  $c d$ , as denoted by Darts, which convey by horizontal Lines to meet the Perpendiculars at  $h$  and  $m$ , whose Intersections give the several Heights, Projections, and Out-Lines of the Column, which describe by Hand, as in the Example. The five Projections and Lines,  $h i k l m$ , being given, are a Guide to draw by Hand, the horizontal Curves of the Capital, &c. Now describe



scribe the Abacus, draw occult Lines from r, &c. to touch the Line c d as at q, &c. which convey by horizontal Lines at Pleasure, to o n, &c. then a Perpendicular from N gives the Projection n; the same from O gives the Projection at o; then draw the diminishing Lines n z, &c. and a Perpendicular from Q gives the Projection z. These are the general Rules to find the perspective Representation of any of the five Orders of Columns; however, I shall continue a Description of every Order, to shew more plainly the Use of the Points of Sight and Diminution, with their proper Differences and Distance.

### See P L A T E X.

FIG. XXIV. Represents the Tuscan Intablature, with all its Measures in Minutes.

A, Cima Recta.  
B, Corona.  
D, Cavetto.  
E, Freeze.  
F, First Facia.  
G, Second Facia.

*Of the perspective Representation. See FIG. 25.*

A B C D E F G H represents the Geometrical projecting Plan of the Intablature returned at each End, and cut off square at B C, and F G.

The Geometrical Plan being laid down, fix the Ground-Line K M, parallel to the front Line A H of the Object, at any intended Distance, continue K M at Pleasure to I; then consider the Position you intend to fix the Points of Sight and Diminution, which in this Example is oblique as M f; then raise a Perpendicular from f, equal to the Height of the Eye, which gives the Point of Diminution L, set the Point of Distance from f towards g, which in this Example extends the Bounds of the Plate, so much as the Difference between the Lines L K and f g, then drop Perpendiculars from the Lines of the several Mouldings, between B C and F G, to the Ground-Line M P, which are noted by Darts; from whence draw diminishing Lines to L; so done, draw a Line from G to the Point of Distance, which cuts the Ground-Line M P at S, from whence raise a Perpendicular to cut the Line L P as at e, then draw e d a z; again draw a Line from E to the Point of Distance, which cuts the Ground-Line at R, from whence raise a Perpendicular to cut the Line O L as at c, and draw the Line c b; again, draw a Line from H, to the Point of Distance, which cuts the Ground-Line at V, from whence raise a Perpendicular to cut the Line L P as at

X; draw X Y, also the Diagonals Y b and c X, and where they are cut by the Lines from the several Darts to L, draw the Lines of the Front Mouldings between Y X and c b; then is a b c d e X Y Z the true perspective Representation of the Geometrical Plan A B C D E F G H.

*Of the Perspective Elevation. See FIG. 26.*

But observe in this Example, that the Point L is the Point of Diminution to the Plan, and both Point of Diminution, and Distance to the Elevation, which is different in the following Plate, &c.

Again, as there is an Affinity between the Lines of the Plan, and those of the Elevation, the horizontal Line of Distance L K must be equal to the Ground-Line of Distance f g, &c. and r q equal to A M and H P; as was before hinted.

To proceed, draw occult Lines from the several Geometrical Members of the Intablature, Fig 24, to the perpendicular Line h i (pointing to the Sight L) from whence draw horizontal Lines at Pleasure, which gives the perspective Heights and Projections of the several front Members; then raise Perpendiculars from the Division on the Diagonals Y b and c X, to cut the horizontal Lines, which gives the Projections at the Angles Q m o, and T n W, from whence draw diminishing Lines to L, and intersect them by Perpendiculars from the Divisions on the Line z a, gives the extent of the several Mouldings s l p, &c. and the true perspective Representation of the Intablature.

### See P L A T E XI.

FIG. XXVII. Is the Geometrical Elevation of half the Subplinth, and Impost of the Membretto and Circular Architrave of the Tuscan Arch or Piazza; figured from a Scale of 60 Minutes, taken from the Diameter of the Columns. See the Terms.

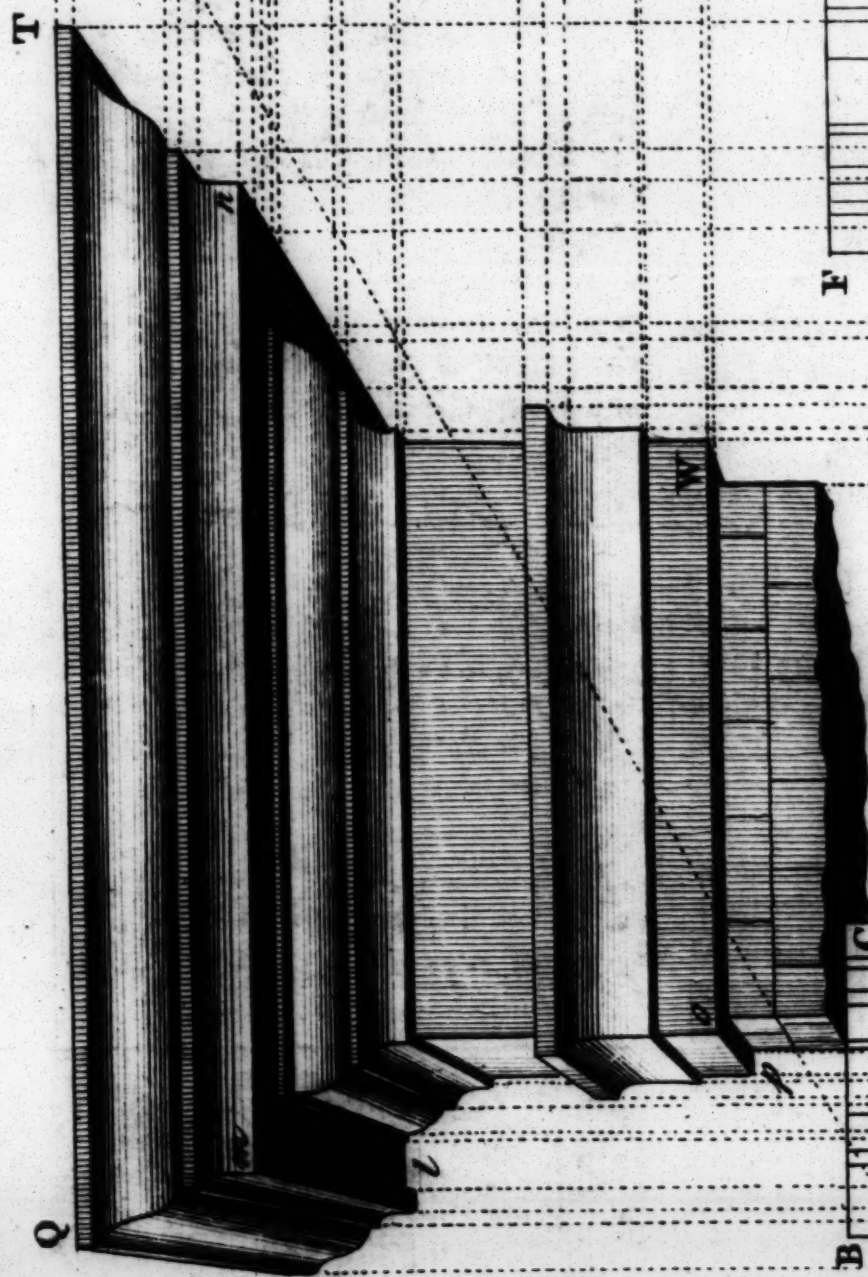
A, Fillet.  
B, Cima Reversa.  
C, Cima Recta.  
D, Cavetto.  
E, Facia.  
F, Base of the Column broke off.  
G, Subplinth.  
H, H, Body of the Membretto.  
I, Plinth to the Membretto.  
K, Center of the Arch.  
L, Part of the Architrave about the Arch.

Before I proceed with the perspective Representation of the foregoing Figure, I shall make Remarks on some of its geometrical Proportions, viz. Palladio gives

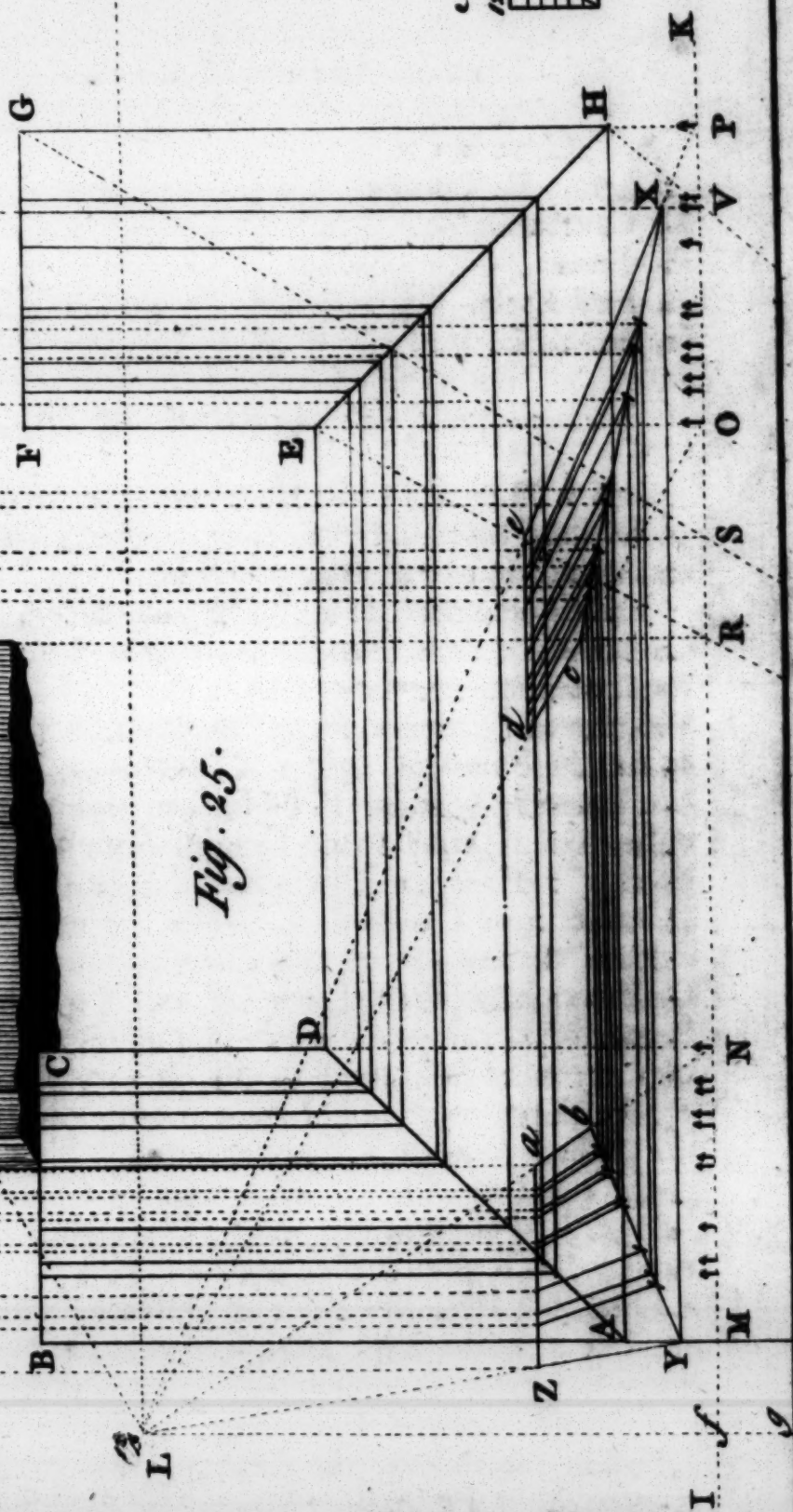


*Fig. 24.*

A Scale of Feet & Inches.



*Fig. 26.*



*Fig. 25.*







$\frac{1}{4}$  the Diameter of the Arch is equal to 2. Models 16 & 2. Minutes.

Plat.

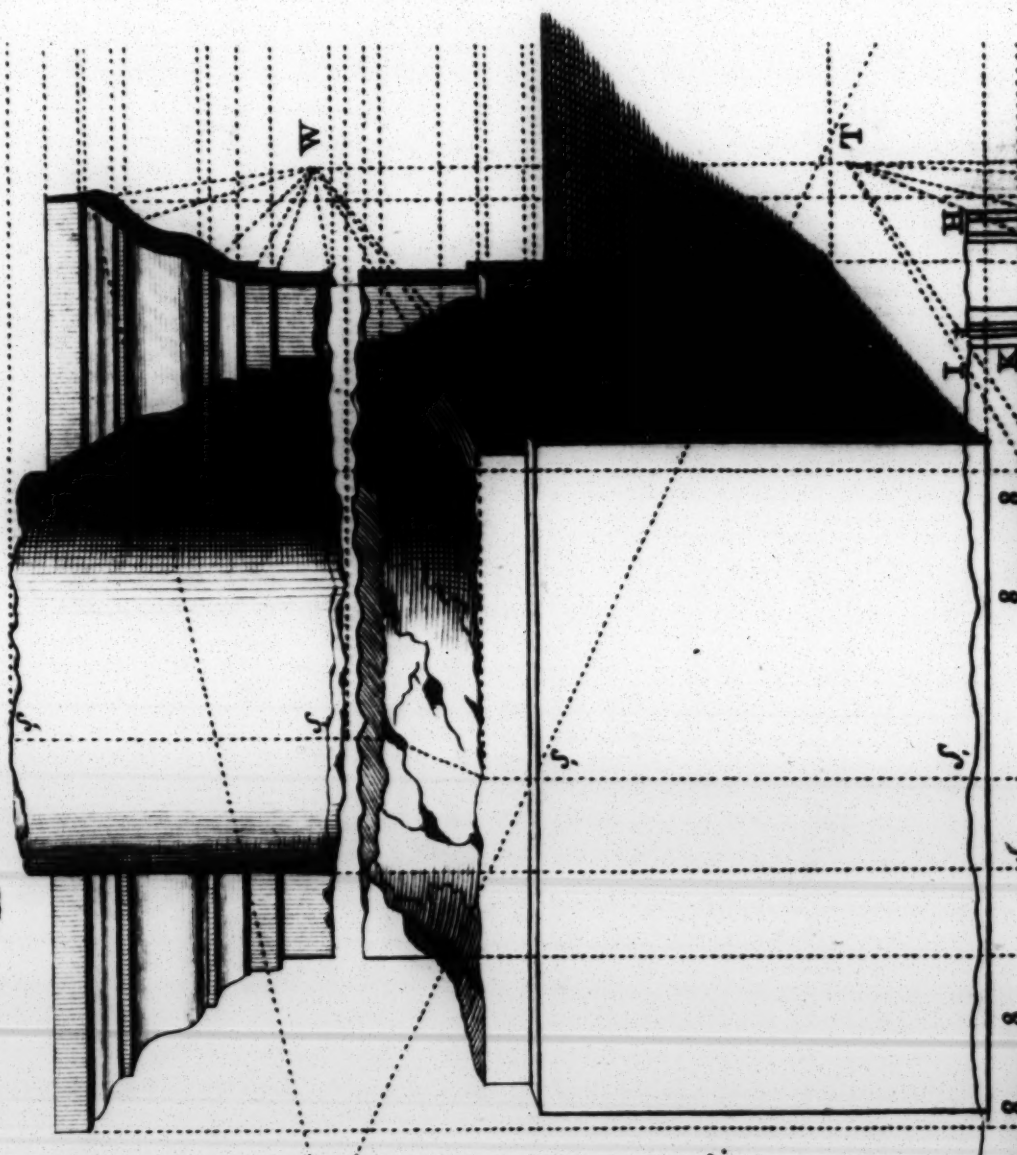
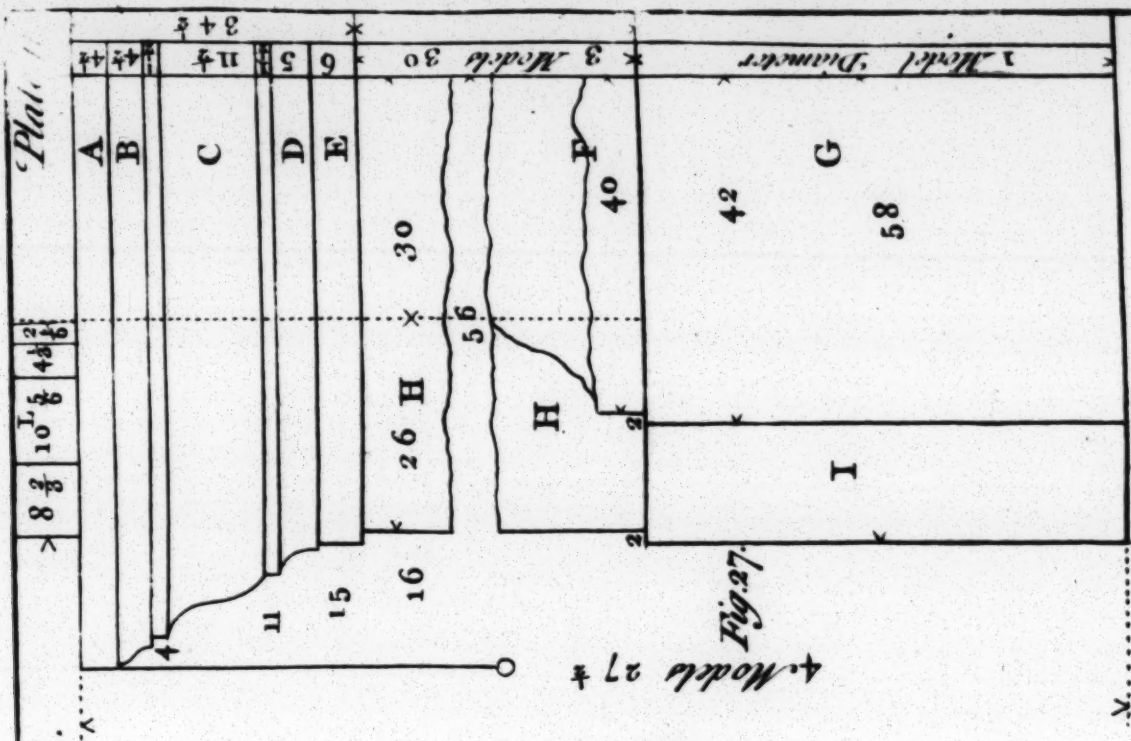
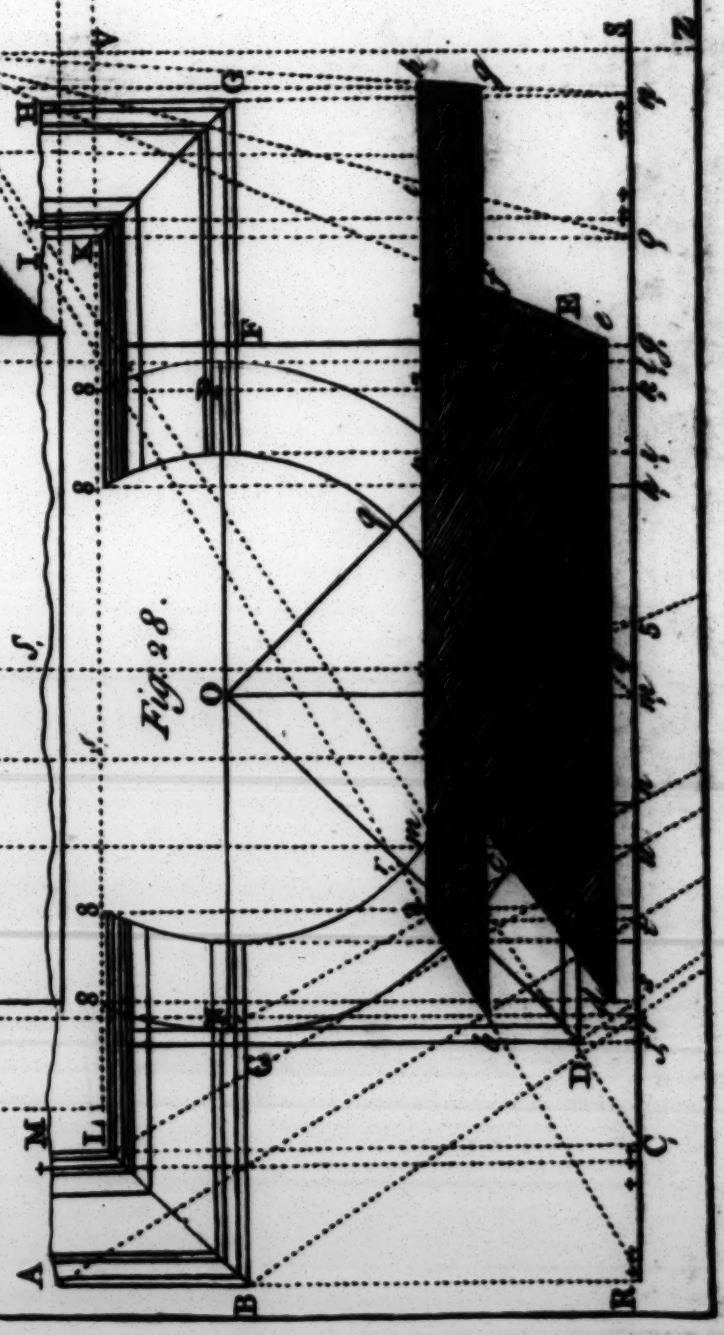


Fig. 28.







ALMA

ALMA



$\frac{1}{4}$  the Diameter of the Arch is equal to  $2 \frac{1}{2}$  Models 16 & 17. Minus K\*

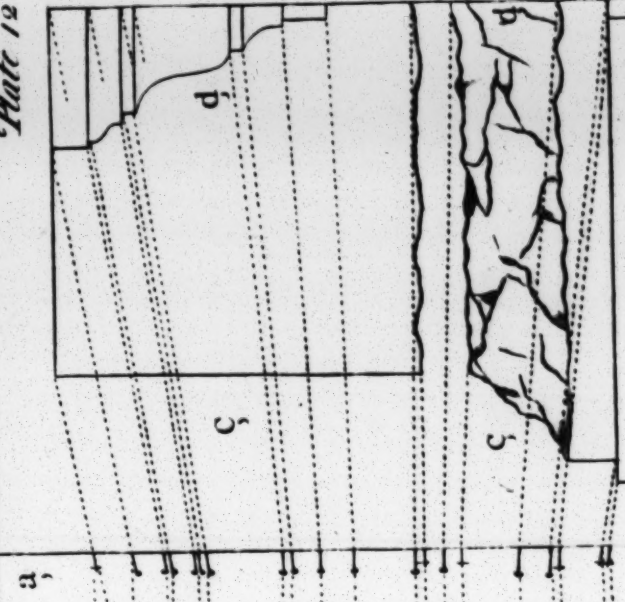


Fig. 29.

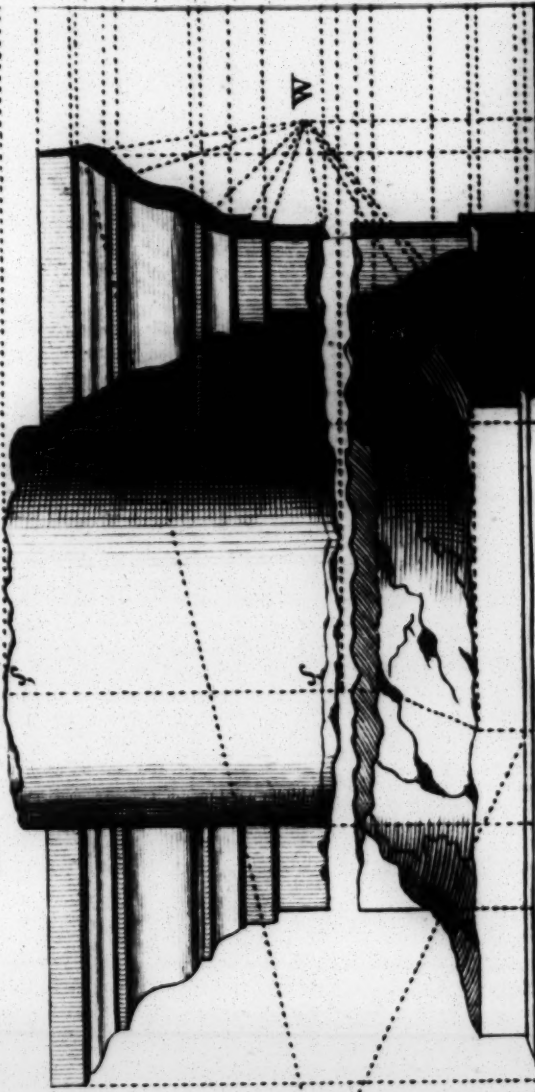


Fig. 30.

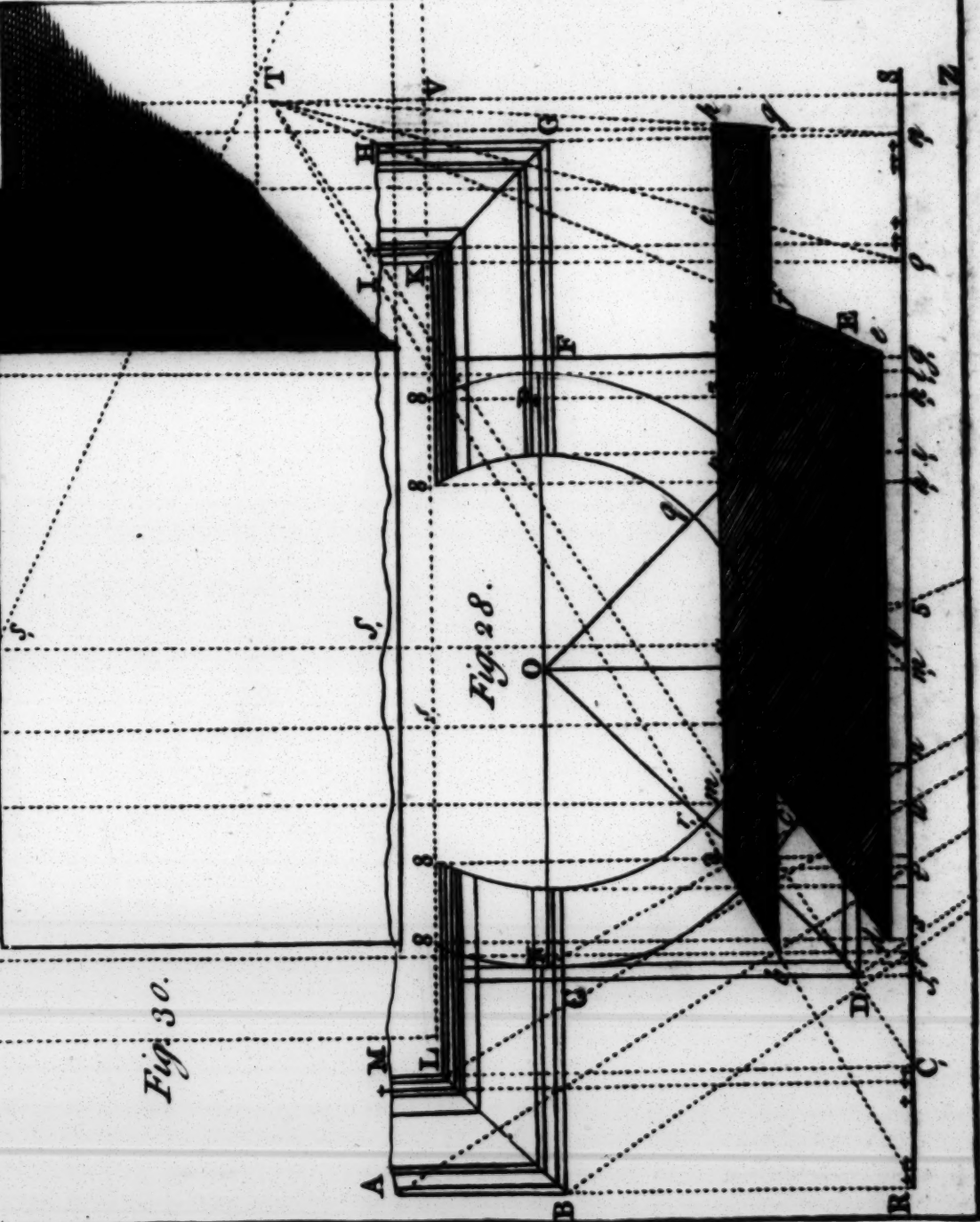


Fig. 28.







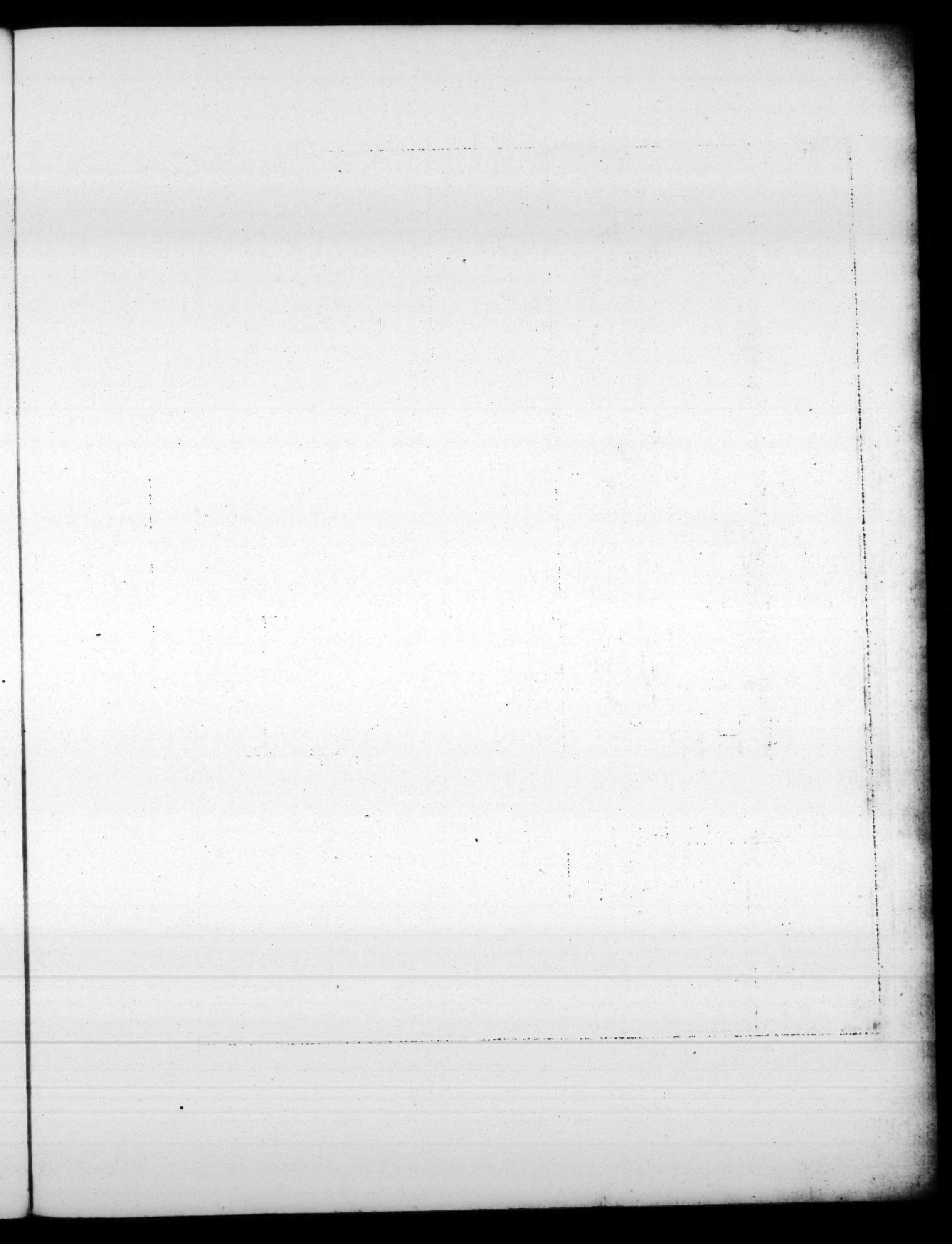




Fig. 33

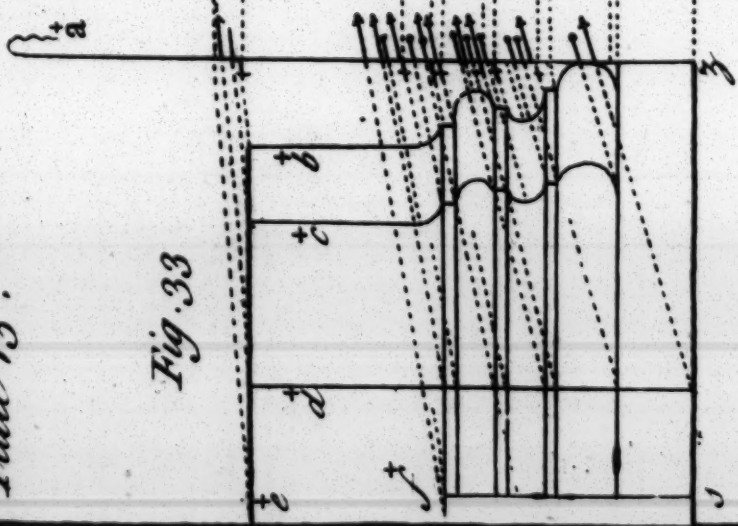


Fig. 34.

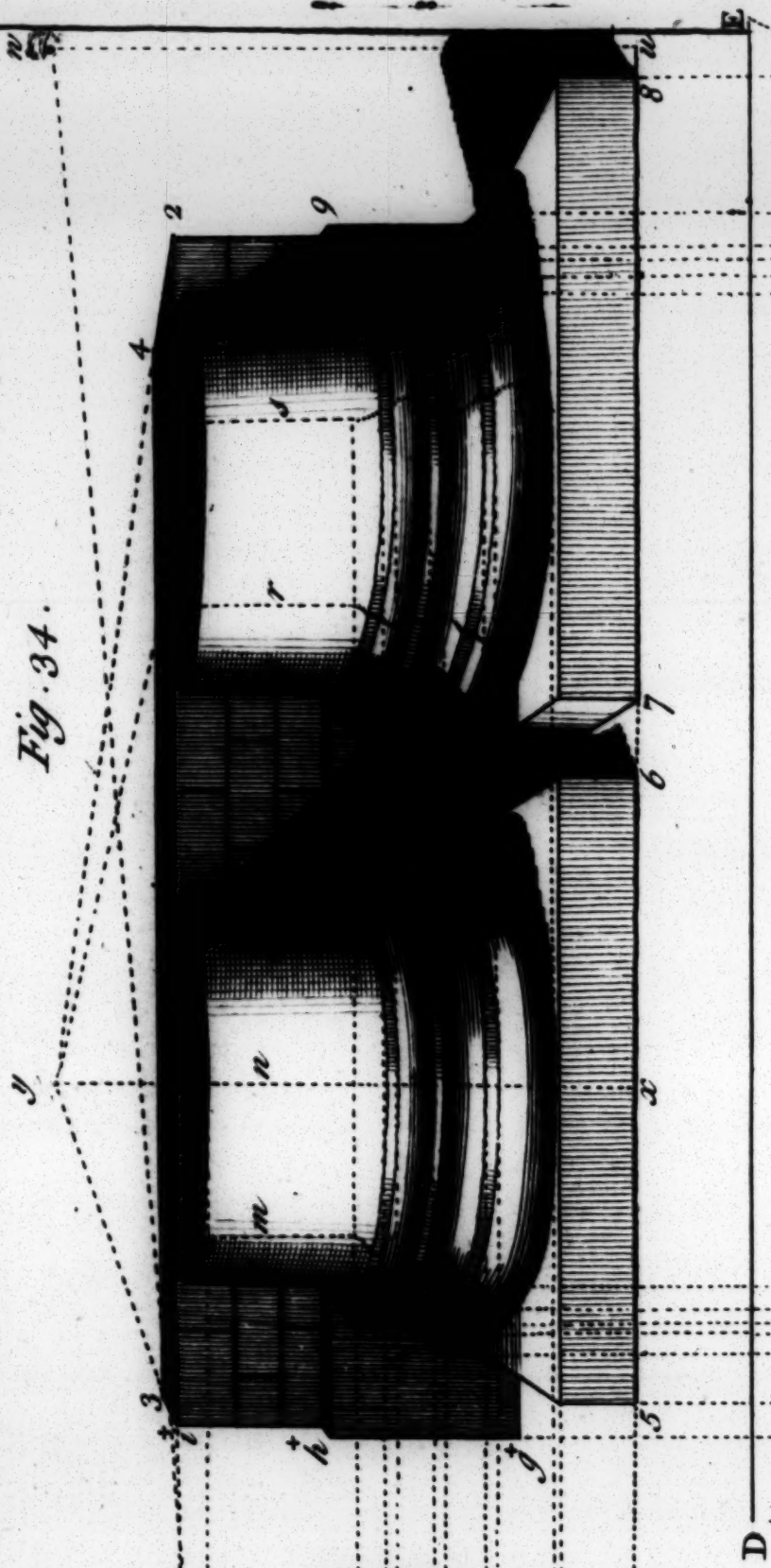


Fig. 31.

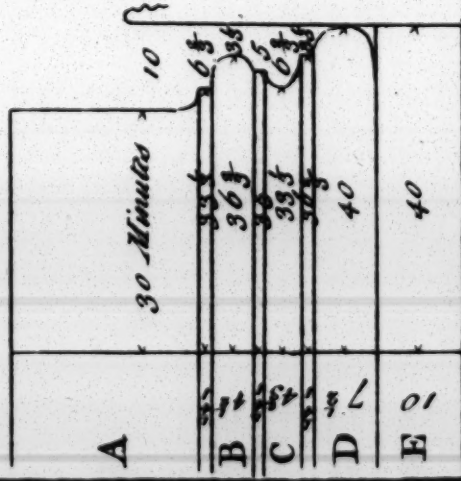
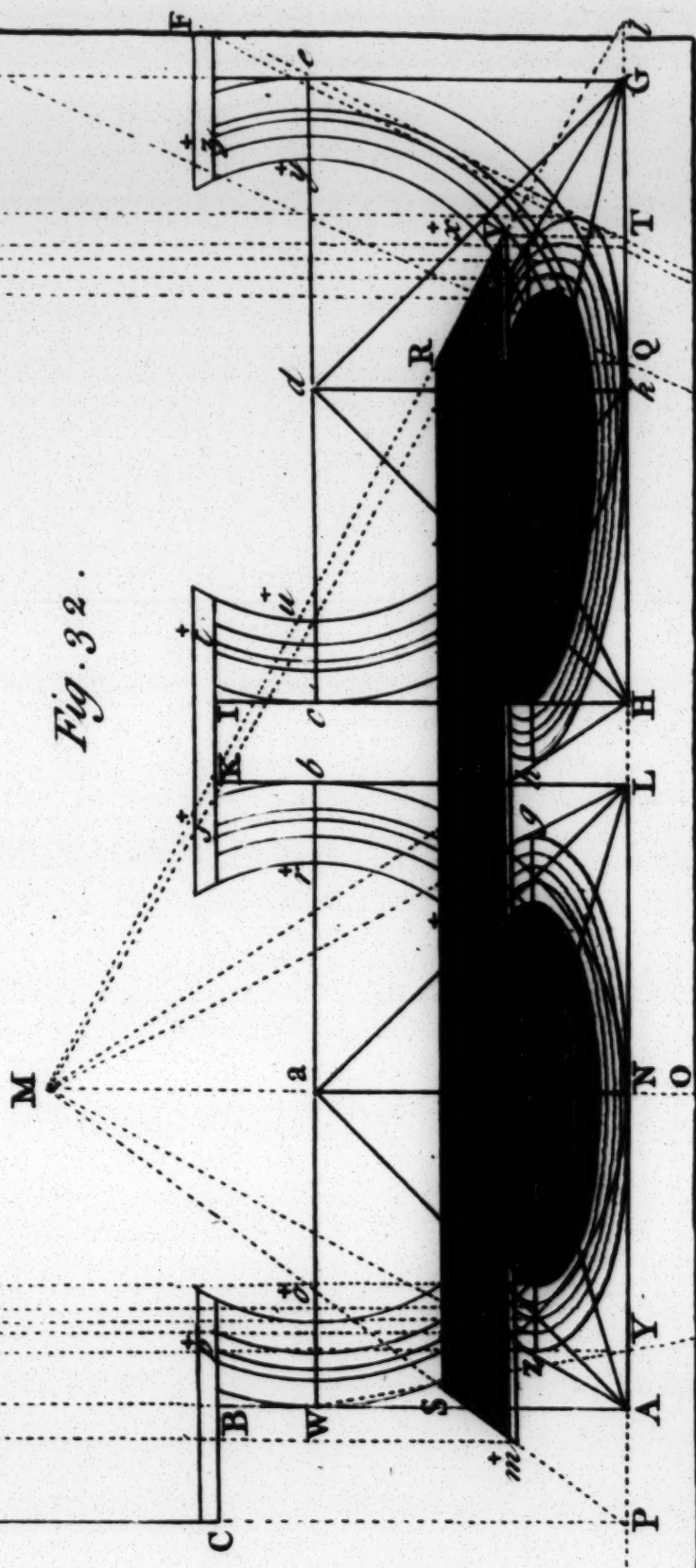


Fig. 32.





gives 8 Models to the Height of the Column and Subplinth, and 7 Models, 40 Minutes to the Height of the Arch in the Clear, by which there remains no more than 20 Minutes for the Height of the Key-stone, which is 6 Minutes less than the Width of the Architrave, and cannot be reduced to Practice, because Room is wanted for the Architrave, &c. it being 26 Minutes wide; but to keep as near the Author as possible, I make the Column, with its Subplinth, 8 Models, as he has lay'd down, but allow 39 Minutes for the Length of the Key-stone, which reduces the Height of the Arch in the Clear to 7 Models, 21 Minutes, and gives 13 Minutes Space between the circular Architrave, and the Soffeta of the Intablature, which is all the Alterations I have made in this Example.

*Of the geometrical Plan, with its perspective Representations. See FIG. 28.*

Describe the Plan A B C D E F G H I K L M, with its Circles, from the Center O, on the Line N P, to 8, 8, 8, 8, on the Line K L, which represents the Plan of the Column, and Projection of the broken Base, and draw the Diagonals B L and G K, also O D and O E; then describe the Ground-Line R S, at the intended Distance from D E, parallel thereto, and fix the oblique Situation as S, from whence let up the Point of Diminution T, perpendicular to R S, also the Point of Distance from S towards Z, then drop Perpendiculars from all the Lines of the geometrical Plan, to the Ground-Line R S, as from those at B to R, which are denoted by little Crosses, from whence draw Lines to T, gives the Divisions as at a b, &c. also those at D, being dropt to f, and draw'd to T, gives the Divisions at d and x, from O to m gives q o, from 8 8 = 8 8, &c. to s t h i k l g o n, &c. drawed to T, gives the Divisions at x y 3 3 i g h; then draw a Line from A to the Point of Distance which cuts the Line R S at t; from whence raise a Perpendicular to cut the Line R T at a; draw a h, then draw a Line from B to the Point of Distance, which cuts R S at r, from whence raise a Perpendicular to cut the Line R T at b; draw b g also from L N and D, draw Lines to the Point of Sight, and raise Perpendiculars, from their Intersections, at the Ground-Line, to cut their respective Diminishing Line, gives the perspective Depths of the Plan; the lesser Depths are given by the Help of the Divisions on the Diagonals b m = d o = e o = g i &c.

*Of the perspective Elevation. See Plate 12, &c. FIG. 29 is the geometrical Profile.*

Describe the Perpendicular Line of Heights a b so far distant from the Subplinth, as Y 3 equal to D f or E g of the Plan, describe a new Line of Distance,

L Y equal with that of the Plan S Z, &c. and set up the Point of Diminution from V to W equal to S T, also the Point of Sight from L to X, equal to V W; then draw occult Lines from the several Members to the Line a b, pointing to the Sight X, which are denoted by Crosses and Spikes; the one is those from the Front c, c, c, 3, and the other from d, d, d, from whence draw horizontal Lines at Pleasure; then raise Perpendiculars from the several Projections of the perspective Plan to intersect their respective horizontal Lines, as the Perpendiculars from q 7 of the Plan, cuts the horizontal Lines Produce from c c c 3, at s s s, gives the several Heights of the Front, so of all the other Lines; then describe the Thickness; draw Lines from the front Projections to the Point of Diminution W, and intersect them by Perpendiculars from the Divisions of the back Line a m i h of the Plan, gives the perspective Thickness, as in the Example.

### *Of the Dorick Order.*

#### *See P L A T E XIII.*

FIG. XXXI. Represents the geometrical Elevation of the Attick Base, which is generally used to the Column of this Order; its Measures are set down both from a middle Line, and Line of Projection. See the Terms.

A, Body, or Shaft of the Column.  
B, Upper Torus.  
C, Cavetto.  
D, Lower Torus.  
E, Plinth.

FIG. XXXII. Is the Plan of the coupled three Quarters Attick Basis, joined to a Wall, also the perspective Representation of the same.

First describe the Plan A B C D E F G H I K L, then the middle Lines W b, c e, a N, and d k h, with the several Circles of Projections, and mark the Point of Diminution M, and drop a Perpendicular towards O, on which set the Point of Distance; then draw the Lines of Diminution M P, M A, M L, M H, M G, and M I, and draw a Line from E to the Point of Distance, which cuts the Ground-Line at Q, raise Q R to touch M I, and draw R S parallel to the Ground-Line; again, from the two Lines of the Plinth at F, draw Lines to the Point of Distance, to touch M I at V, draw the two Plinth Lines m V, then draw a Line from W to the Point of Distance, which cuts the Ground-Line at Y, raise Y Z to touch the Line M A, draw the middle Line z g, and h k, also N f, and k i, and



the Diagonals A f, L f=H I, and G I; then from the Circle's Divisions at p o n q r s t u w x y z, drop Perpendiculars to the Ground-Line, from whence lay a Rule on M, and set on the several Divisions on the perspective Diagonals, &c. as before directed in the Explanation of the *Tuscan* Base, &c. then through the Marks draw the several Curve-Lines of Projection, and the perspective Representation of the Plan is finished.

*Of the perspective Elevation.*

Draw the Ground-Line s u at Pleasure, then describe the Profile of the three-fourth Base, FIG. XXXIII. with the Plinth s f; and set on the middle Line d, with the diagonal Line of Projection C, and the front Line of Projection b; raise the Line of Heights Z A, then perpendicular over M; raise the Point of Diminution from x to y, equal to N M, and from Z set the Line of Distance U, equal to that of the Plan from N towards O, and set the Point of Sight, from U to W, equal to x y, and raise Perpendiculars from the several Divisions of Circles at k to o s, also from N to n; then from the Line of Projections b, draw occult Lines to a z, tending to the Point of Sight w, which are denoted by inward Darts; from whence draw horizontal Lines to intersect those at n and s, which gives the Rise and Projections of the Mouldings, &c. at the Front, by which draw the dotted Curves, &c. at s. Again, from the Divisions of Circles on the Angles A f, L f, H I and G I, raise Perpendiculars to m, o, r and t; then from the diagonal Projections C, draw occult Lines to a z, which are denoted by Spikes; from whence, by horizontal Lines intersect the Perpendiculars at m, o, r, t, by which draw the Curves of the Mouldings, &c. Again, raise Perpendiculars from the Divisions of Circles on the middle Lines at z g, and h k to l p and q t; then, from the middle Line of the Profile d, draw occult Lines to the Lines a z, which are denoted by long Darts, from whence draw horizontal Lines to cut the perpendicular Lines at l, p, q, t, by which draw the out Lines and Curves as in the Example, which are a Guide for the several Members, &c. Then describe the Front of the Plinths by raising Perpendiculars from A L and H G to 5 6 and 7 8, and cut them by a horizontal Line from the Height of the Plinth at z; then from the Angles at 5, 6, 7, 8, draw the Return Lines of the Plinths tending to the Point of Diminution y. Again, for the Wall g, h, i, raise Perpendiculars from m and v to g h i, and 9 2, then draw occult Lines from s f e to the Line a z, from whence draw i 2=h 9=g, &c. then from i and z draw Lines to the Point of Diminution y; and from S and R raise Perpendiculars to cut i y and z y at 3 and 4; draw 3 4, and the Example is finished.

*Of the DORICK Capital.*

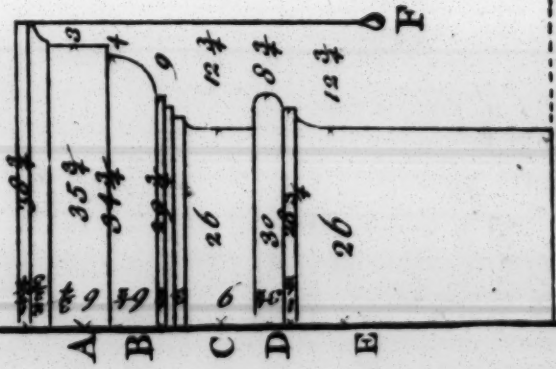
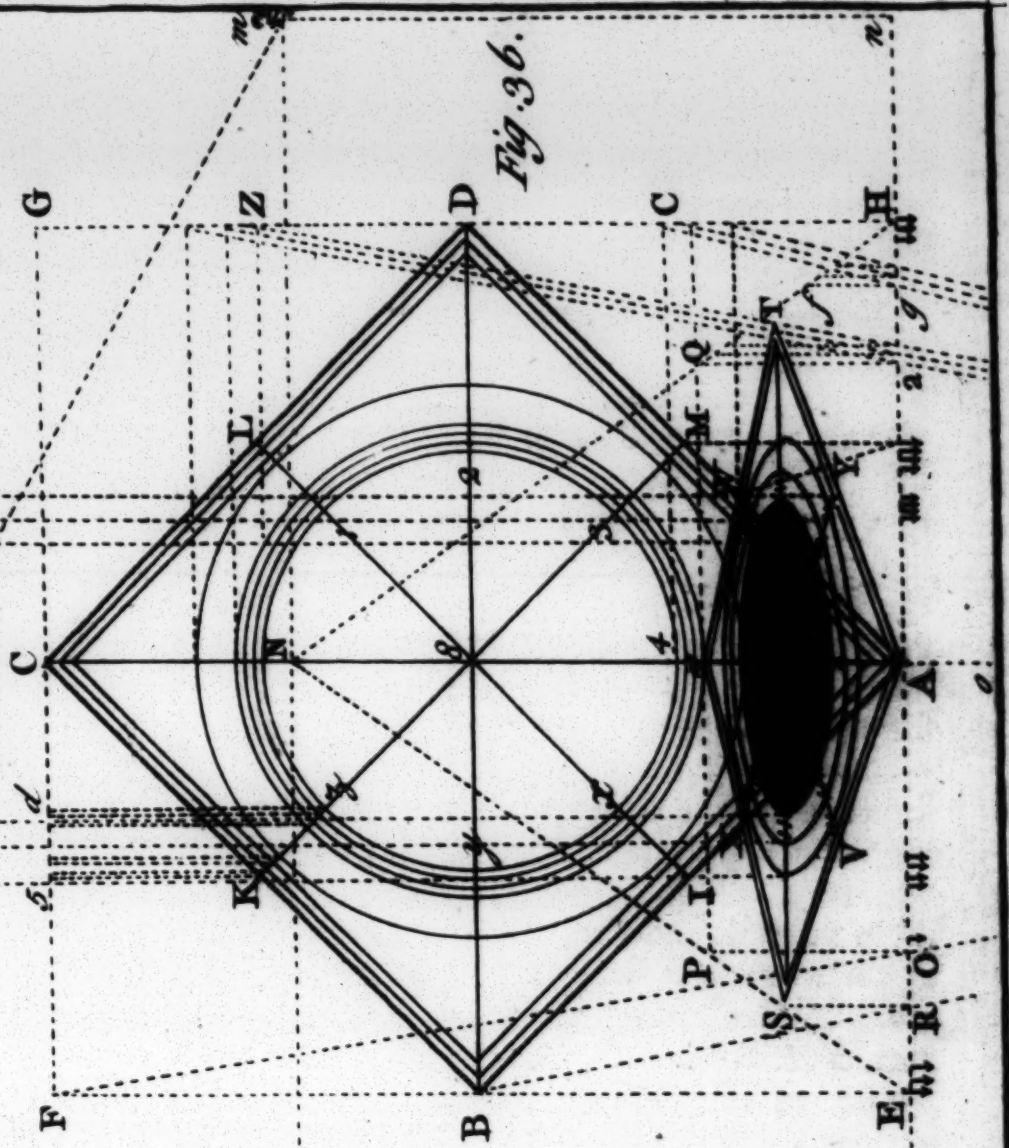
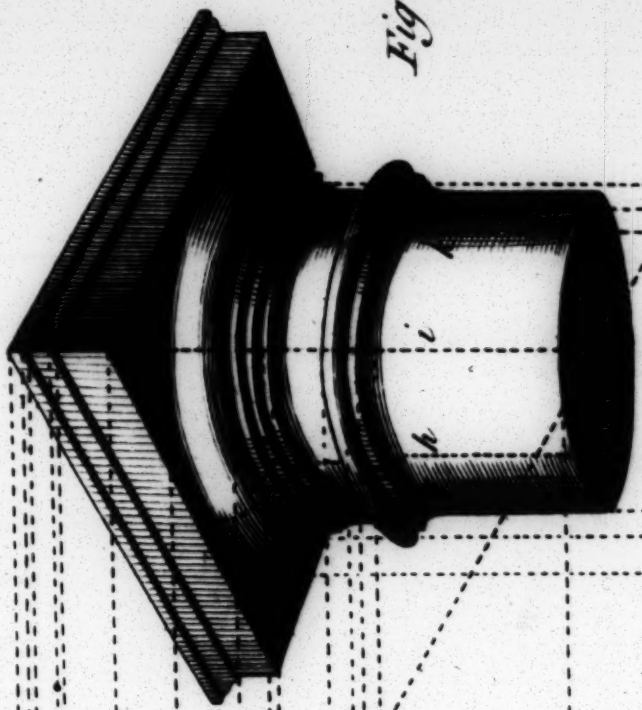
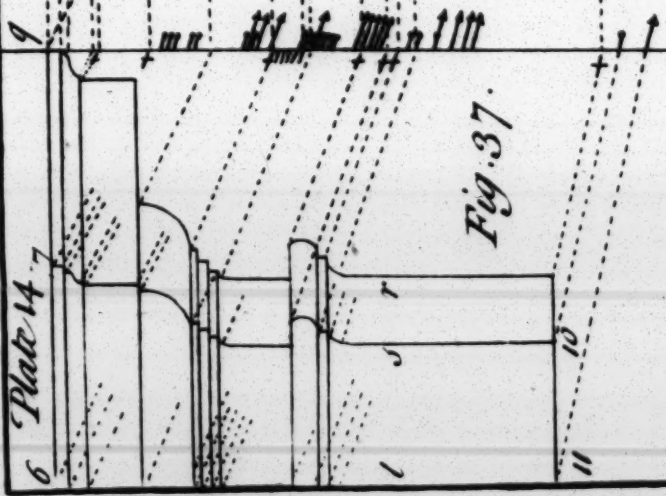
FIG. XXXV. Is the geometrical Elevation of the Dorick Capital, with all its Proportions in Minutes, measured both from a middle Line, and Line of Projection. See the Terms.

A, Abacus.  
B, Ovolo.  
C, Collar.  
D, Astragal.  
E, Shaft, or Body of the Column.  
F, Line of Projection.

FIG. XXXVI. is the geometrical Plan of Projections viewed on a Line with the Angle, the Ground-Line being at right Angles therewith, as E H and A C, draw A B C D with all the circular, middle, and diagonal Lines; then draw the Ground-Line E n at Pleasure, and form the outer Square E F G H, and measure the Point of Diminution from A to n, also the Point of Distance from A towards O; draw the diminishing Lines E N and H N; then draw a Line from F to the Point of Distance, which cuts the Ground-Line at O; raise O p, and draw p Q parallel to the Ground-Line, also a Line from B to the Point of Distance, which cuts the Ground-Line at R; raise R S, and draw the Line S T, and describe the out Line A S W T A; then from the two Divisions of the Abacus B and D, drop Perpendiculars to the Ground-Line at E and H, which are denoted by Darts; from whence, pointing to N, set on those at S and T; then from all the Divisions, both circular and straight, at M 3, drop Perpendiculars to the Ground-Line as denoted by Darts between A a; then lay a Rule on the Darts and Points N, and set on the Marks on the middle Line at Y and W, and from the Marks at Y set on those at V, also from W to X. Again, from the circular Divisions at y, drop Perpendiculars to the Ground-Line as denoted by Darts between O and A; from whence pointing to N, set the Divisions on the Line S T, repeat the same from the Divisions at 2, and set them on the Line S T: Next find the Divisions at A and W, then, from all the Divisions between N C, draw horizontal Lines to Z G, and from their Extrems draw Lines to the Point of Distance, which cuts the Ground-Line at a; from whence raise Perpendiculars to touch the Line N H at Q, &c. and from those Extrems, draw horizontal Lines to the Line A W, which gives the several Divisions at W. Again, from all the geometrical Divisions on A 4, draw horizontal Lines to H C, then from their Extrems draw Lines to the Point of Distance, which cuts the Ground-Line at g o; from whence raise Perpendiculars to touch the Line N H at f, &c. from whence draw horizontal Lines to touch the Line A,

which











w  
fe  
dr



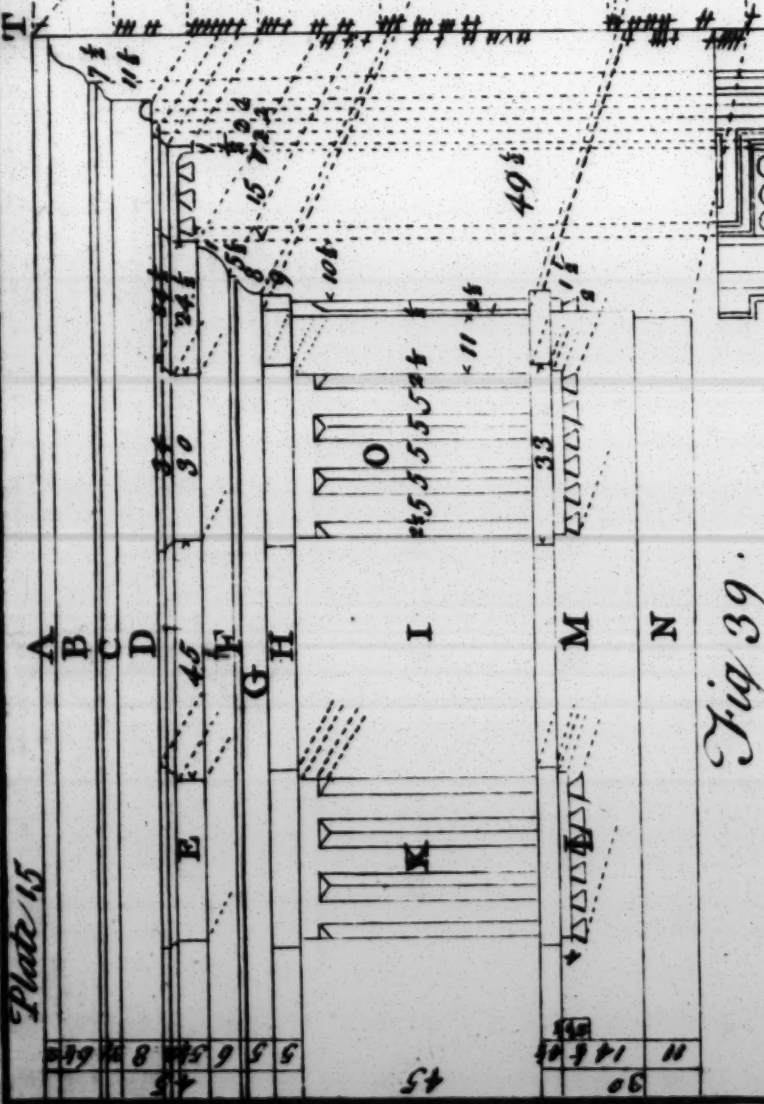


Fig. 39.

Scale of 2 Diameters of the Column

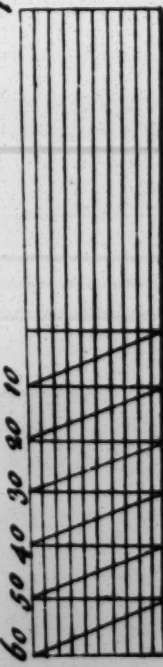
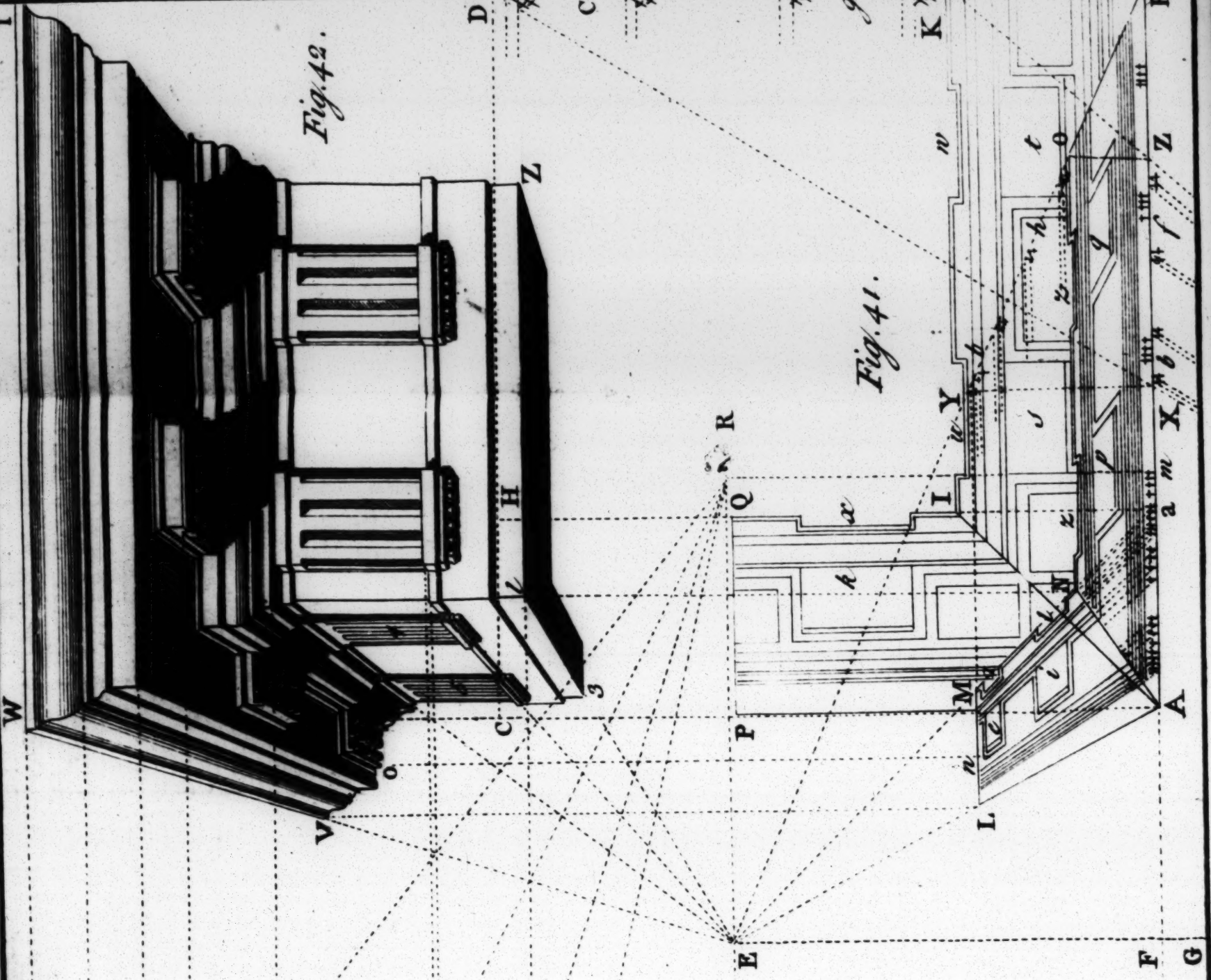
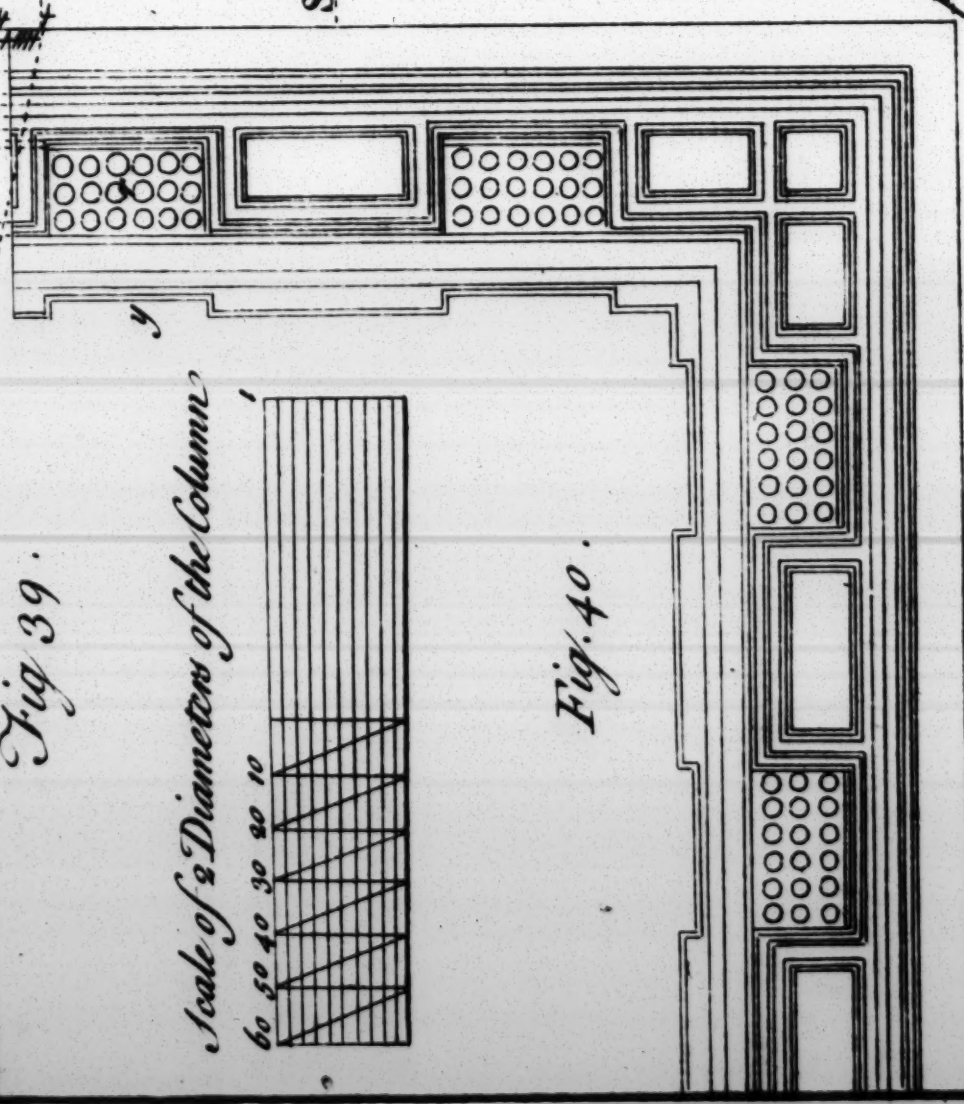


Fig. 40.





which gives the perspective Division at A. All the several Divisions being set on at A V X S W W T Y, draw the streight Lines of the Abacus, then the Circles, and the perspective Representation of the geometrical Plan is finished.

*Of the perspective Elevation.*

FIG. XXXVII. Is the angler Profile of half the Capital; 6 q is equal to B 8 of the Plan, and its Moulding q r project over B y = A 4, &c. but the Mouldings 7 = s = 10 projects over I X = M 3, &c. and are fore-shortened so much as they appear from the Eye, which is found by drawing a Line from x to the Point of Distance; then measure at right Angles from I to that Line, gives the Projection 7 s.

The Profiles Use being understood, drop the Perpendicular Line of Heights q p, and observe the Ground-Line n E is continued, because the Capital is supposed to hang from a Beam a considerable Height above it; then take the Length of the Line of Distance from A O, &c. and set it from u level with N, to the Point of Sight m n m equal to A N.

Then proceed to describe FIG. XXXVIII. From A raise the Perpendicular to i, and from the Projections r q draw occult Lines to the Line p q, pointing to the Sight m, which are denoted by Darts within the Line q p, from whence, by horizontal Lines, the Heights of the Mouldings on the Line i are given. Again, raise Perpendiculars from the Divisions at V and Y, to h and k; then from the several Projections s 7 draw occult Lines to q p, which are denoted by Spikes; from whence draw horizontal Lines to cut the Perpendiculars at h and k, by which draw the Curves of the Mouldings h k. Again, from the Divisions on the Line S T, raise Perpendiculars to g and l, then from 6 t 11 draw occult Lines to the Line q p, which are denoted by long Darts; from whence, by horizontal Lines to the Perpendiculars at g, l, describe the out Lines of the Capital, &c. then draw the straight Lines of the Front Abacus with the Mouldings, &c. and observe the Point of Diminution N is of no Use in this angler Capital, because there is no Line points to it; therefore the Returns of the Abacus must be done thus: Take the whole Angle of the Capital B D, and set it from q towards 6, and draw an occult Line from its extream Point to the Line q p, from whence draw a horizontal Line to cut the middle Line i, to which Intersection, point the Returns of the Abacus; then describe the Curve to the lower End of the Shaft, by raising Perpendiculars from all the eight inward Divisions of the Perspective Plan, five of which are already done by the Lines g, h, i k, l; then take the Column's Diameter 2 Y, and set it from 12 towards 11, and from its extream Point draw an occult Line to the Line q p, from whence draw a horizontal Line to cut the back middle Lines. Again, set t s

from 11, and from that Point draw an occult Line to the Line p q, from whence draw a horizontal Line to cut the two other backward Perpendiculars; then is 8 of the perspective Points given, from which the Curve must be drawn by Hand, then is the perspective Elevation, FIG. XXXVIII. finished.

*Of the DORICK Intablature.*

FIG. XXXIX. Is the geometrical Elevation, with all its Proportions in Minutes. See the Terms.

- A, Fillet.  
B, Cima Recta.  
C, Cima Reverfa.  
D, Corona.  
E, Block and Bells.  
F, Ovolo.  
G, Cavetto.  
H, Capping.  
I, Metop.  
K, Triglyph.  
L, Tenia.  
M, First Facia.  
N, Second Facia.

FIG. XL. Is the geometrical Plan of Projections, with the several Divisions on the Soffeta of the Corona; the Bells are each 4 Minutes Diameter, and the Space between one Minute, and their Distance from the Edge of the Block half a Minute.

Before I lay down the perspective Representation of the foregoing Examples, I shall shew why I differ from *Palladio* in the Proportions of the *Dorick* Cornice. See his Explanation, Chap. xv. to Page 27. He says, the Columns ought to be seven and an half, or eight Diameters high, and the Intablature one Fourth of the Columns high; so both are subject to a Variation, because one depends on the other.

Again, the Bells of this Orders, as laid down by *Palladio*, are very seldom put in Practice by our Modern Builders, which is a sufficient Proof that they are not so pleasing to the Eye as those used by our late and present *British* Architects, who I think have as much Right to alter the Proportions of Members to their Taste, as *Palladio* had to alter those of *Vetruvius*, which is the Reason I have made this Difference in the *Dorick* Cornice; not that it is altogether my Invention, but the Taste of many able Artists, who has also fixt the *Dorick* Column at eight Diameters high, and the Intablature equal to two Diameters; which Proportions I have strickly followed in the foregoing Example, and have figured the Nick of the Column which is omitted in that of *Palladio*. I also differ from him in the Module, which he makes half the Diameter of the Column in this Order only, (for what Reason I know not) and the whole Diameter to all the other,



other, I make the Modules of every Order the Diameter of the Column, knowing no Reason to the contrary.

*Of the perspective Representation, to the geometrical Plan of Projections. See FIG. 41.*

The Plan A C H E K B A, with all its Lines of Projections, and its End C H, and B K cut off square, is supposed to be draw'd and view'd oblique, as A F.

The Front A B is the Ground-Line, which continue at Pleasure towards F, and raise the Perpendicular F E equal to the Height of the Observator's Eye, then is E the Point of Diminution, and from F measure on the intended Point of Distance towards G, draw the Lines E A, and E B, and drop a Perpendicular from I to a, and draw the Line E a; then from D draw a Line to the Point of Distance, which cuts the Ground-Line F B at X, from whence raise a Perpendicular to touch the Line E B at Y, from thence by a horizontal Line, draw L M; again, from K draw a Line to the Point of Distance, which cuts the Ground-Line at Z, from whence raise a Perpendicular to cut the Line E B at O; draw O N, also the Diagonal, or Mitre-Line A N; then drop Perpendiculars from all the Lines parallel to A P, between A P and Q I, to the Ground-Line, which are denoted by Darts between A a, from whence pointing to E, draw the Lines between A L, and N M, and from their extreme Points at the Line A N, draw all the Lines between A B and N O, parallel to A B, then from the Trigliphs U W, and Blocks s t, with the Projections of their Capping, drop Perpendiculars to the Ground-Line, which are denoted by four Places of Darts on the upper Side between a B, from whence pointing to E, describe the Side Projections of the Blocks p q, and Trigliphs z z, with the Lines of the Pannels, then describe the Side Projections of the Blocks i e, and the Trigliphs 1 2, &c. but observe the Block and Trigliph between C H, and P Q is cut off for Reasons before mentioned; therefore use r y, FIG 40, from whence draw horizontal Lines to C, which are denoted by short dotted Lines, and Darts; again from the Block k, and Trigliph x; draw horizontal Lines to g, which are denoted by dotted Lines and Darts in the same Manner; then from the Darts at c and g, draw Lines to the Point of Distance, which cuts the Ground-Line at the Darts on the under Side, at b and f, from whence raise Perpendiculars to the Line E B, at d and h, which are denoted by perpendicular Darts, from whence, by horizontal Lines, describe the Blocks and Trigliphs i e = 1 2, then is the perspective Representation of the Plan finished.

N. B. There ought to be as many Lines, or Darts, as there are Lines in the several Projections, as FIG.

40, but the Scale being so small, I have omitted some of the lesser Divisions, and only used the Master Projections, as at g, c, &c.

*Of the perspective Elevation, FIG. 42.*

Drop the Perpendicular T S, then fix the Point of Sight R, by setting the Plan's Line of Distance from S to R, level with the diminishing Point E; then from the Profile or outward Projections of the Intabature, FIG. 39, draw occult Lines to the Line T S, which are denoted by the outward Darts on that Line, from whence horizontal Lines give the several Heights, &c. of the Front l w, 1 2, then Perpendiculars from the Plan, as A W, &c. gives every Member its proper Projection: Again, draw occult Lines from the Trigliph O, and a Block over it, to the Line T S, from whence horizontal Lines give the Side Heights of the Trigliph 4, and Block over it, and so of the Trigliph K, and Block E, with the Trigliph 5, and Block over it; then find their Projections by Perpendiculars from the Plan at the Blocks i, e, and Trigliphs 1 2, and draw the Return Lines W V, &c. pointing to the Point of Diminution, and give them their proper Projections at V O, &c. by Perpendiculars from the Divisions on the Line L M, then is the perspective Elevation finished.

*Of the Proportions of the Dorick Arch or Piazza.*

PLATE XVI. FIG. XLIII. Represents Half the Diameters of the Pedestal, and its Column, also the Membretto, which bears the Arch, and Impost, with Part of the circular Architrave, &c. See the Terms.

- A, Cima Reverfa.  
 B, Fascia.  
 C, Cima Recta.  
 D, Bead.  
 E, Neck of the Membretto.  
 F, Astragal.  
 G G, Body of the Membretto.  
 H H, Broken Base.  
 I, Corona.  
 K, Ovolo.  
 L, Cavetto.  
 M M, Die of the Pedestal.  
 N, Cavetto.  
 O, Cima Recta.  
 P, Plinth.  
 Q, Circular Architrave.  
 R S, Out-Line of the Column.



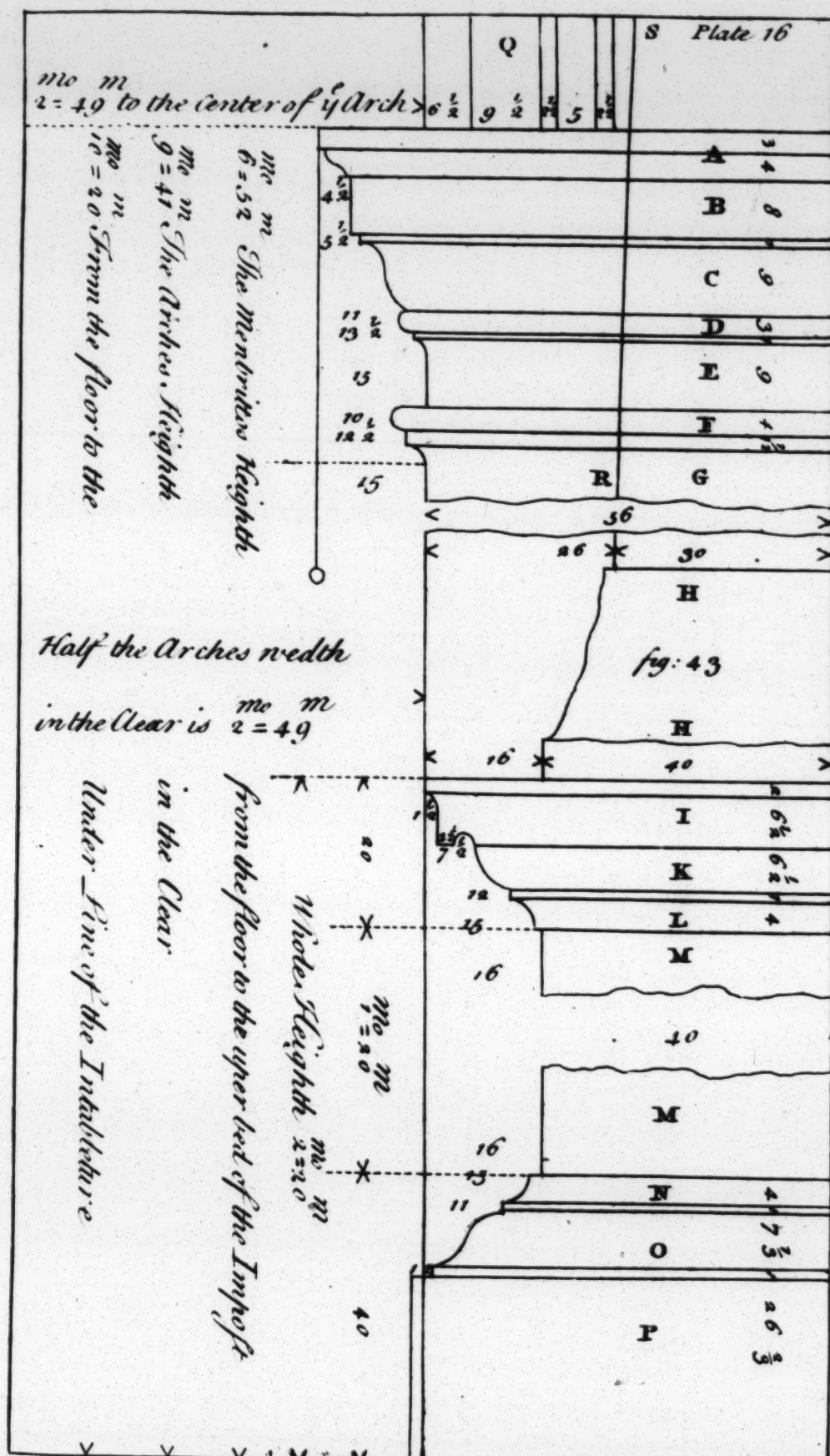












Plate 17.

Fig. 46.

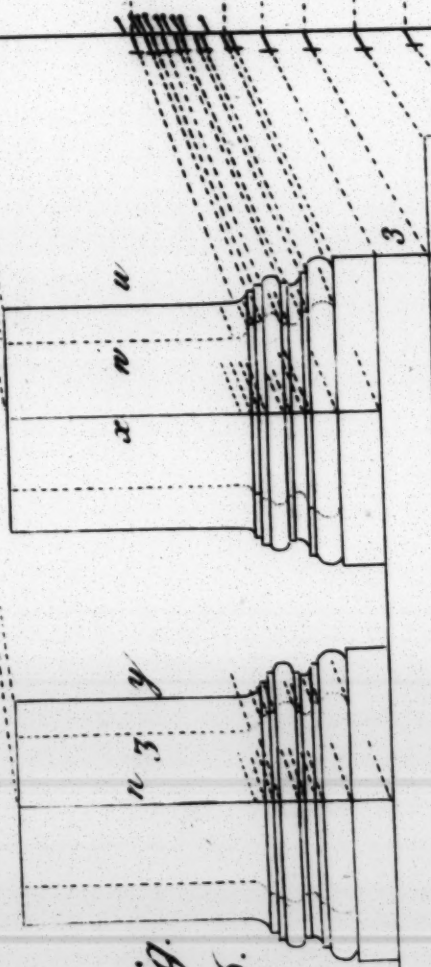
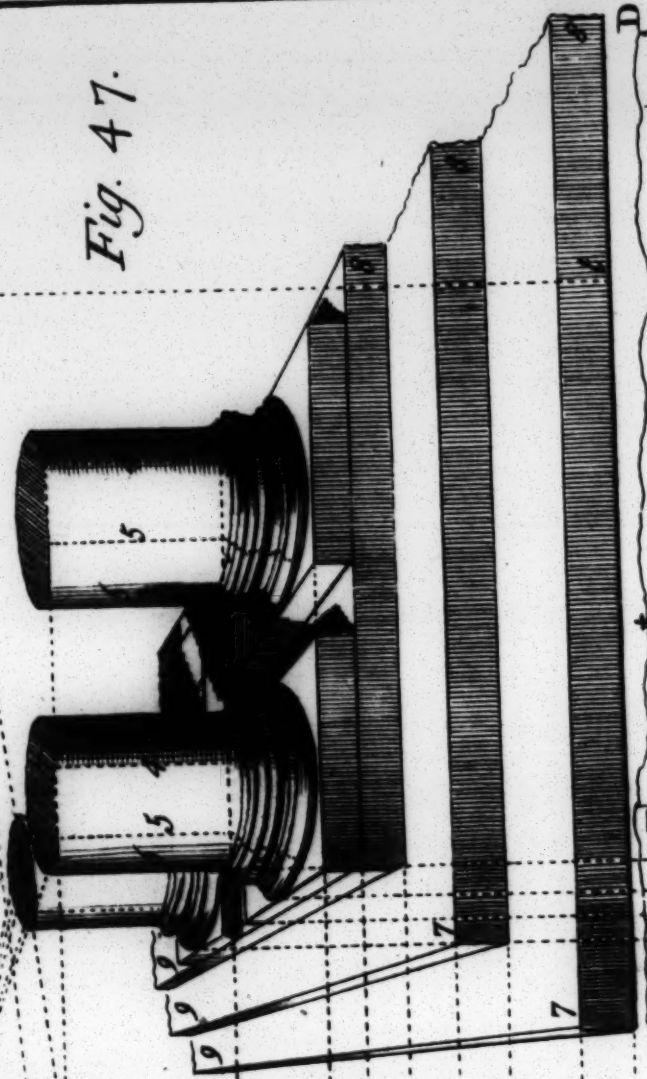


Fig. 47.



A Scale of Feet & Inches.

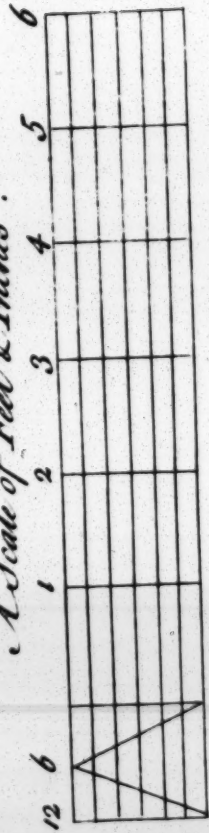
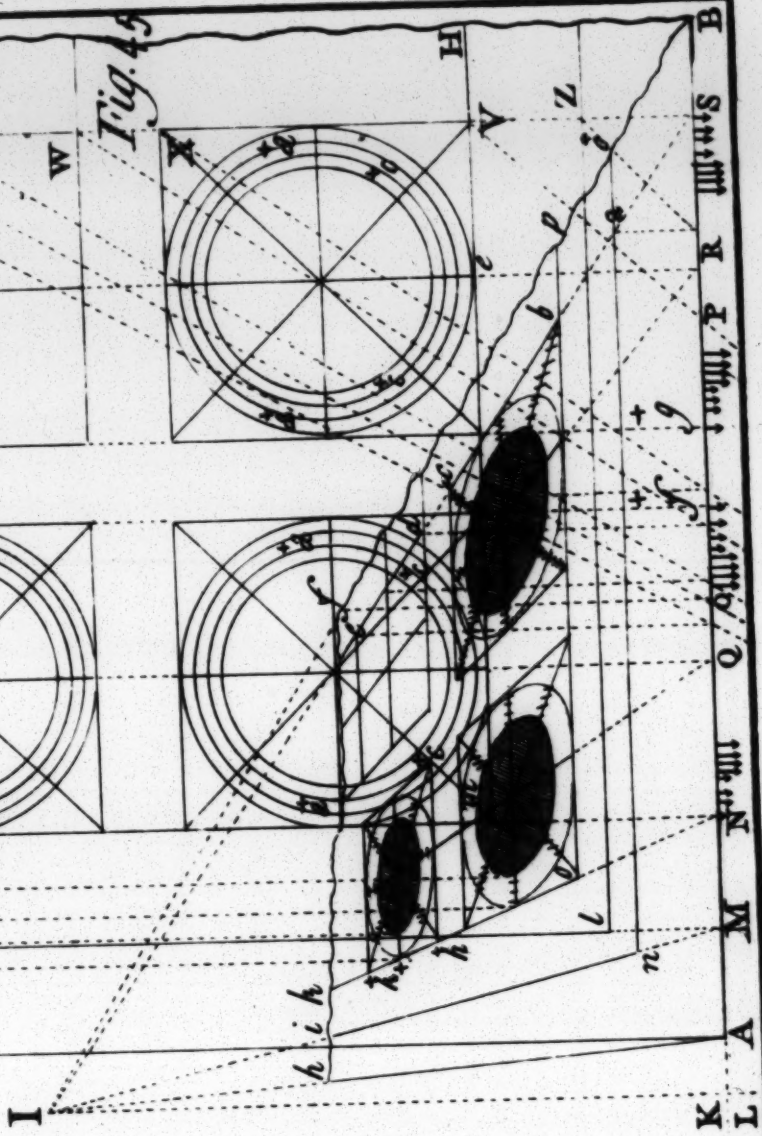
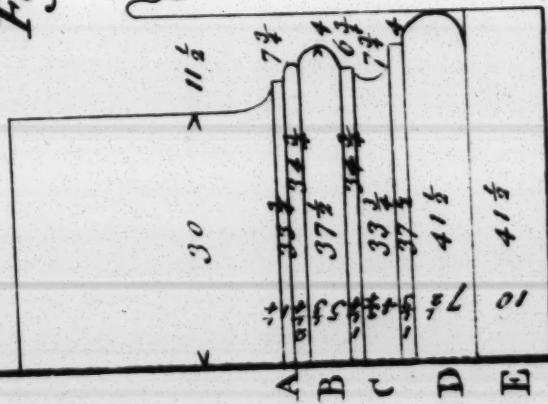


Fig. 44.





The Proportions to the several Parts of this Arch, compared with that of *Palladio*, in the 24th and 25th Pages of his original Folio, where he gives 17 Modules one Third to the Height of the Column, equal to 8 Diameters and 40 Minutes, and the Pedestal 4 Modules two Thirds; which being added together, makes 22 Modules, or 11 Diameters, from the Floor to the lower Line of the Intablature. The Height of his Arch is 20 Modules and an Half, equal to 10 Diameters, 15 Minutes, and there remains 45 Minutes for the Length of the Key-stone; most of which I have followed in this Example, except the Heights of the Column, Key-stone, and Arch.

First, I make the Pedestal equal to *Palladio's*, which is 2 Modules and 20 Minutes high, and the Height of the Column eight Modules; the Whole being 10 Modules, 20 Minutes, between the Floor and the lower Line of the Intablature. The circular Architrave is 26 Minutes; to which add 13, makes 39 Minutes for the Height of the Key-stone; which deduct from 10 Modules, 20 Minutes, and 9 Modules, 41 Minutes remains, for the Height of the Arch in the Clear.

N. B. I omit laying down the perspective Lines of this and the other three following Membretto's, &c. because they afford no more Variety than what was shewn in that of the *Tuscan Order*.

### *Of the Ionick Order.*

#### See P L A T E XVII.

FIG. XLIV. Represents the Ionick Base, with all its Members, figur'd in Minutes, and the Projections shew'd, both from the Middle and Line of Projection. See the Terms.

A, Bead and Fillet.  
B, Upper Torus.  
C, Cavetto.  
D, Lower Torus.  
E, Plinth.

FIG. XLV. Shews the Geometrical Plan, with its Perspective Representation of a Pavement, whereon is fix'd the Bases of three Columns, to which ascends three Steps.

The Geometrical Plan A B C D being draw'd, continue the Ground-Line B A at Pleasure towards K, and set on the intended oblique Position from A to K, and the Point of Diminution from K to I, and Point of Distance from K towards L; draw the Lines I A = I B. Then draw a Line from D to the Point of Distance, which cuts the Ground-Line at o; raise

o f to touch the Line I B at f, and draw the Line f h parallel to A B. Then drop Perpendiculars from the Divisions of the Bases mark'd a a a a, to the Ground-Line A B, which are denoted by 4 Places of short Darts; also from those at c c c c, which are denoted by 4 Places of long Darts. Again, drop Perpendiculars from l to M, from d to Q, and from e to R; then draw Lines from A M N Q f g R S, to the Point of Diminution I; also from z V a x W o T, to the Point of Distance, and when they cut the Ground-Line A B, as at o f P R, raise Perpendiculars to touch the Line I S, at a b c d e; from whence draw the Plinth and middle Lines of the Bases, with a p and b o of the Steps, parallel to the Ground-Line A B. Then draw the several Diagonals, which cut by Lines draw'd from the long Darts to I; which transfer to the middle Lines Q I and R I, to give the several Divisions of the Curves, (as directed to the before-going Bases;) which draw by Hand, and the Perspective Plan is finished.

#### *Of the Perspective Elevation.*

First draw the Geometrical Elevation, FIG. XLVI. and set on the middle Line x n, and the diagonal Lines and Projections z w, and raise the Line of Heights p r; then draw the Ground-Line p D, and raise the Point of Diminution from p to q, perpendicular over I, equal with K I. Then take the Line of Distance K L, &c. and set it from p r to t, from whence raise the Point of Sight s, equal to p q. Then raise Perpendiculars from the Steps A n o, and B o p of the Plan, and draw occult Lines from 2 and 3, to the Line P r, which gives the Heights of the Steps 7, 8, = 7, 8, = 7, = 8. Then from 7, 7, 7, draw Lines to q, and intersect them by Perpendiculars from h, i, k, of the Plan, as at 9, 9, 9, and draw their Returns; also the Returns of 8, 8, 8, pointing to q. Then from the middle Divisions of the Plan draw Perpendiculars to 4, 4, also occult Lines from u 3, to the Line p q, which are denoted by inward Darts; from which, by horizontal Lines, describe the front Mouldings at 4, 4; Again, raise Perpendiculars from the Divisions on the Diagonals of the Plan, to 5, 5, 5, 5, and draw occult Lines from W to the Line p q, which are denoted by Spikes; from whence, by horizontal Lines, describe the Mouldings on 5, 5, 5, 5. Again, raise Perpendiculars from the Divisions on the middle Lines of the Plan to 6, 6; then from x draw occult Lines to the Line p q, from whence, by horizontal Lines, draw the Mouldings 6, 6; then describe the back Column in the same Manner, by Perpendiculars from its Plan; and occult Lines with horizontal Lines from thence, to cut their respective Perpendiculars, gives the several Heights, Projections, and Curves, as before directed.



## Of the Ionick Capital.

### See P L A T E XVIII.

FIG. XLVIII. Represents the Geometrical Elevation of the Ionick Capital, with all its Measures in Minutes. See the Terms.

**A**, Abacus.  
**B**, Volute.  
**C**, Ovolo.  
**D**, Astragal.  
**E**, Body of the Column.

#### Of the Measures to the Ionick Capital.

The Diameter of the Column is divided into 18 equal Parts, and 19 such Parts is the Length of one Side of the Abacus, equal to K L, or K P, on the Plan. (See the Scale and A A over it, also A A over the Abacus.) The Height of the Capital is equal to Half the Abacus, or 9 and an Half of such Parts, and the several Members are divided as the dotted Lines direct; the other Measures of Projection are figur'd under the Capital. This is agreeable to *Palladio's* Directions, in Chap. 16, to his Capital, Page 34; but in Page 36, he has laid down the Profile of the several Mouldings, and figured them different to the former; which I have laid aside, they not answering to the Volute, nor the real Intention of that Capital.

Of the Geometrical Plan, FIG. 49, and its Perspective Representation, FIG. 50.

The Geometrical Plan between the dotted Lines, with the Diagonals L P = K Q, and middle Lines, N O and M R being draw'd, describe the Ground-Line S m, at least so far from the Body of the Column as i M equal to the greatest Projection g h, FIG. 48. Then set on the oblique Position B S, and raise a Perpendicular at Pleasure from S, towards T, and let fall another from S, towards f. Draw V l parallel to S m, at any Distance from D G; then from S, towards f, set on the intended Point of Distance; also from V to T set up the Point of Diminution, and the Point of Sight from h to C, level with T, and equal with S, and the Point of Distance; and raise Perpendiculars from D P n R n Q G to touch the Line V l at H p o o q T; from whence draw diminishing Lines to T. Then describe the Lines I C and I m at any Distance from F G, and draw I T and I T, also horizontal Lines, from G Q S L F, &c. to the Line T C, denoted by Darts; from whence draw Lines to the Point of Distance, which cuts the

Line B m at the several Darts on the upper Side that Line; from whence raise Perpendiculars to the Line T I, denoted by Darts; from which draw horizontal Lines, which gives the perspective Depths of the Abacus, and volutes with their several Divisions.

#### To find the projecting Divisions of the Abacus.

Raise Perpendiculars from those at P and Q, to the Line H l, denoted by Crosses on the under Side of that Line; from whence draw Lines to T. Then from the Division at Q and L, draw horizontal Lines to l and m, as at W and X, denoted by Darts; from whence draw Lines to the Point of Distance, which cuts the Line B m at the Crosses on the under Side of that Line; from which raise Perpendiculars to Lines a and l, denoted by Crosses at Y and Z; from whence draw horizontal Lines, to give the perspective Divisions of the Abacus.

Then draw the diagonal and middle Lines, which (if the Work be true) cuts each other at one centre Point.

To describe the several Curves, raise Perpendiculars from the Divisions at s s, to the Line H l, denoted by Crosses on the upper Side of that Line, from whence draw Lines to T; then draw horizontal Lines to W X, and from thence to the Point of Distance; and at their cutting the Line B m, raise perpendiculars to Y Z, from which draw horizontal Lines, and proceed to finish the Plan by the several foregoing Curves, with their Directions.

FIG. LI. Is the Perspective Elevation, which is described by Perpendiculars from the Plan, and occult Lines from the Object, to the Line d e, denoted by Darts; from whence draw horizontal Lines to the Perpendiculars, which give the Heights and Projections of the several Members, as in the foregoing Examples.

#### Of the Ionick Intablature.

FIG. LII. Is the Geometrical Elevation, with all the Heights and Projections figured in Minutes, as in the Examples. (See the Terms.)

**A**, Cima Recta.  
**B**, Cima Reverfa.  
**C**, Corona.  
**D**, Cap of the Modilion.  
**E**, Modilion.  
**F**, Ovolo.  
**G**, Cavetto.  
**H**, Freeze.  
**I**, Cimatium.  
**K**, First Facia.  
**L**, Second Facia.  
**M**, Third Facia.

The



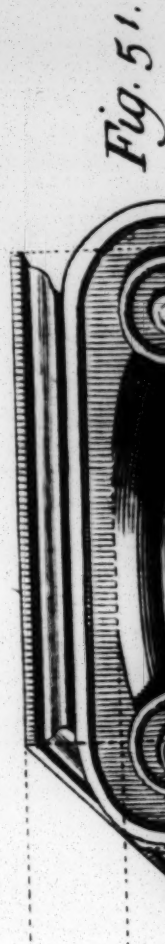
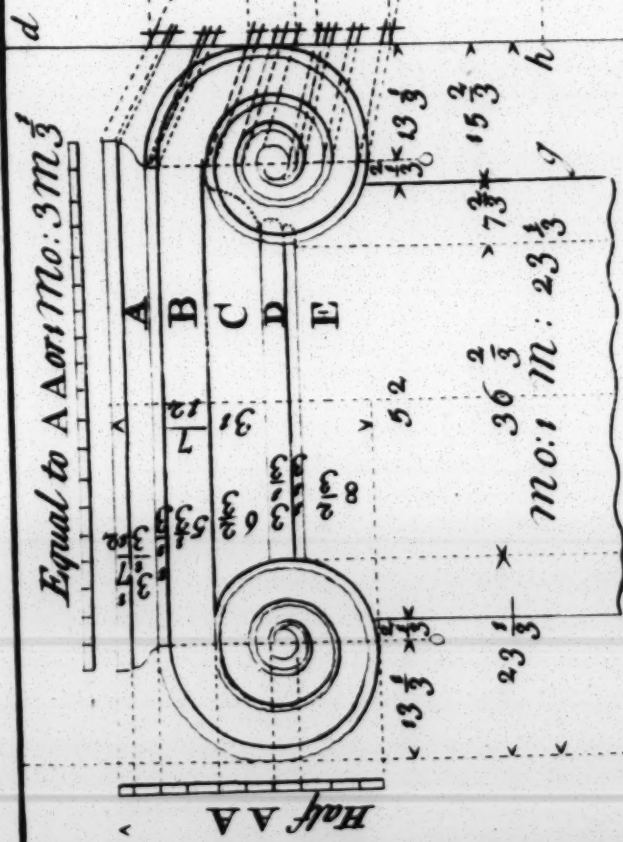
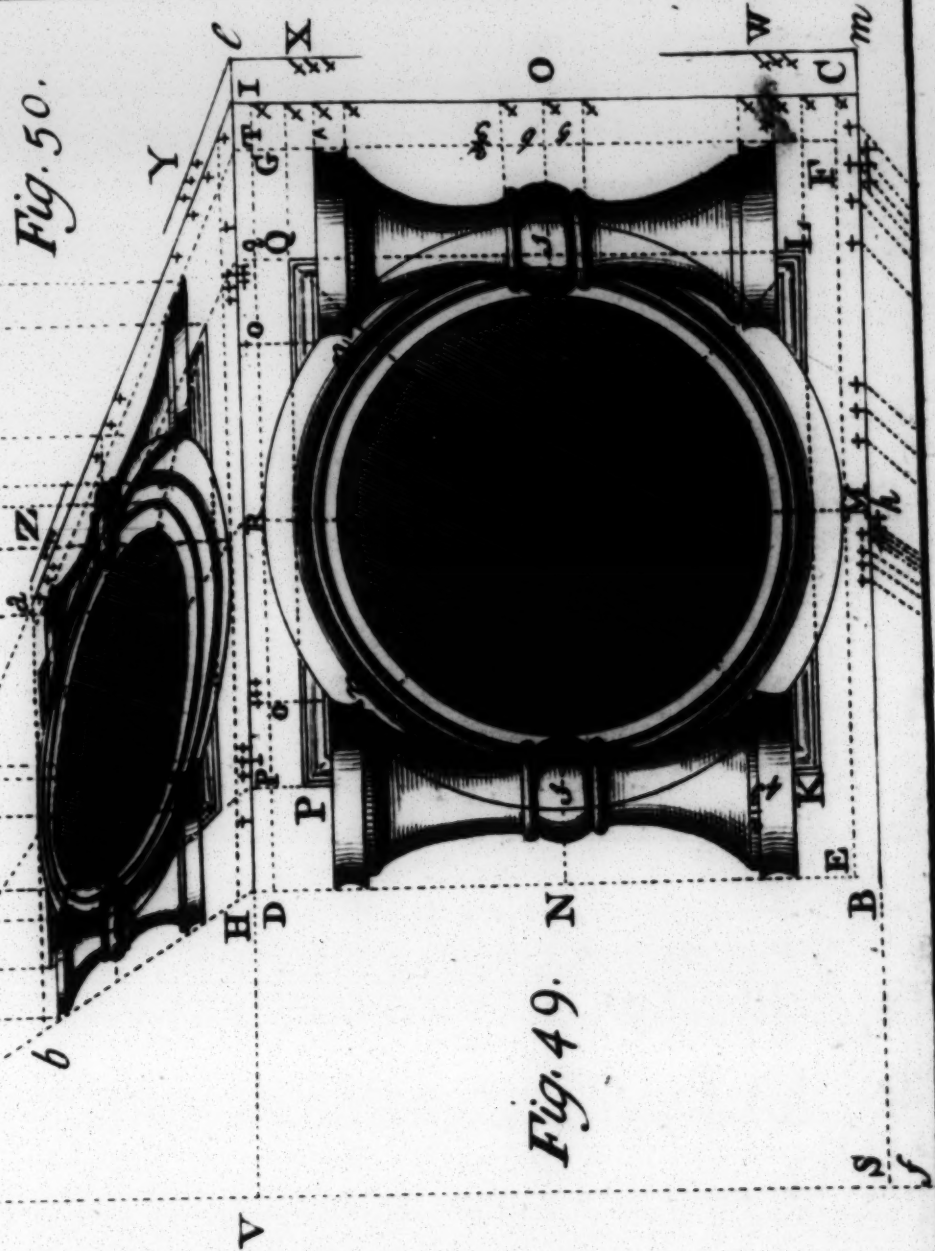


Fig. 50.





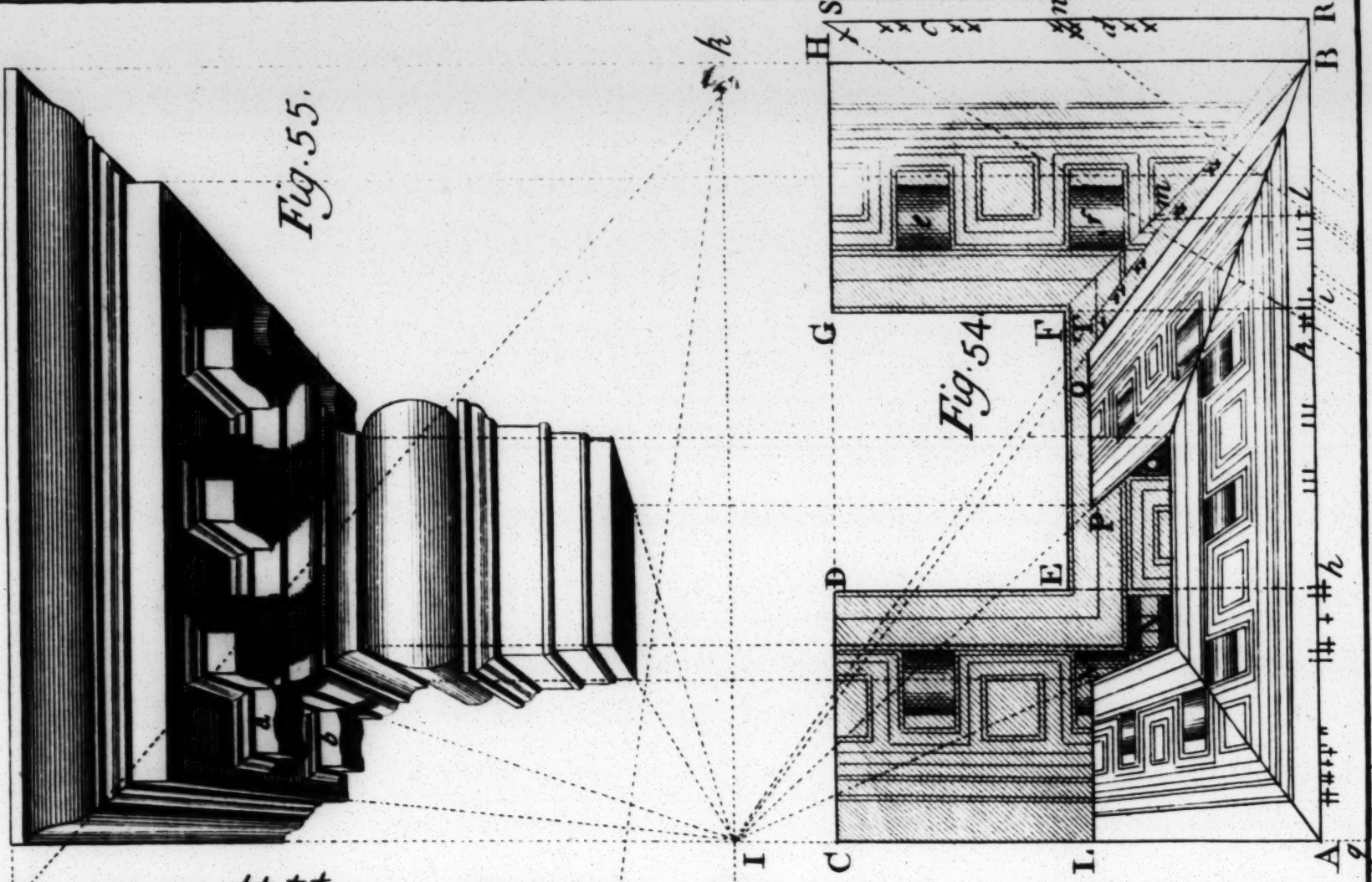
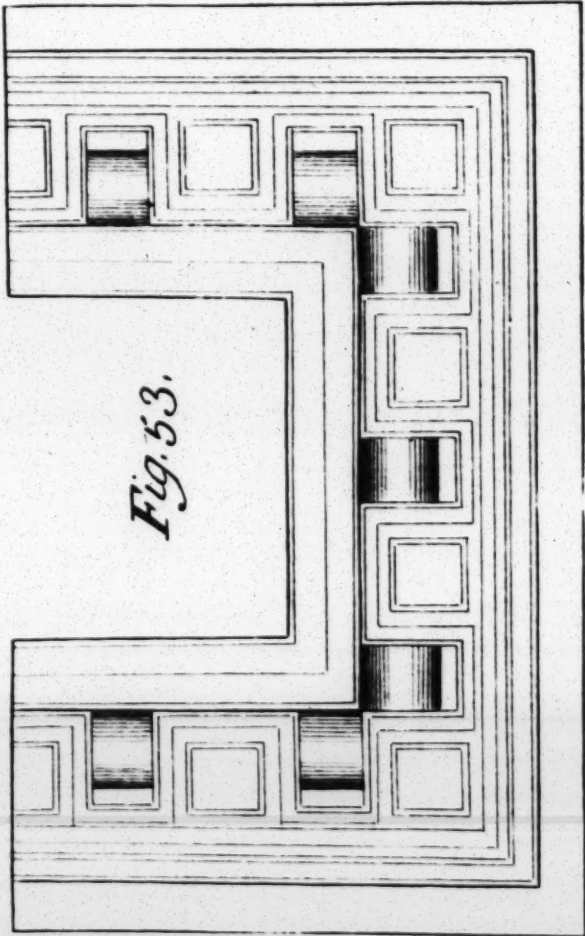
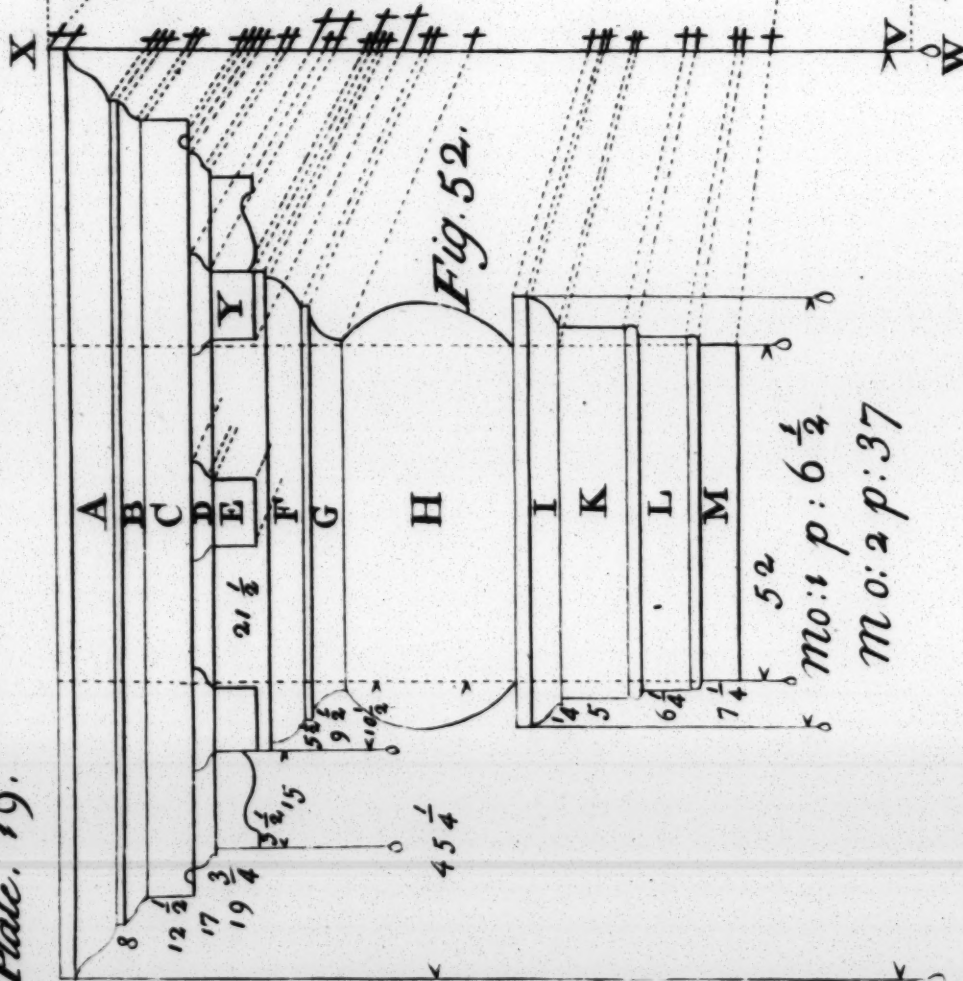
100



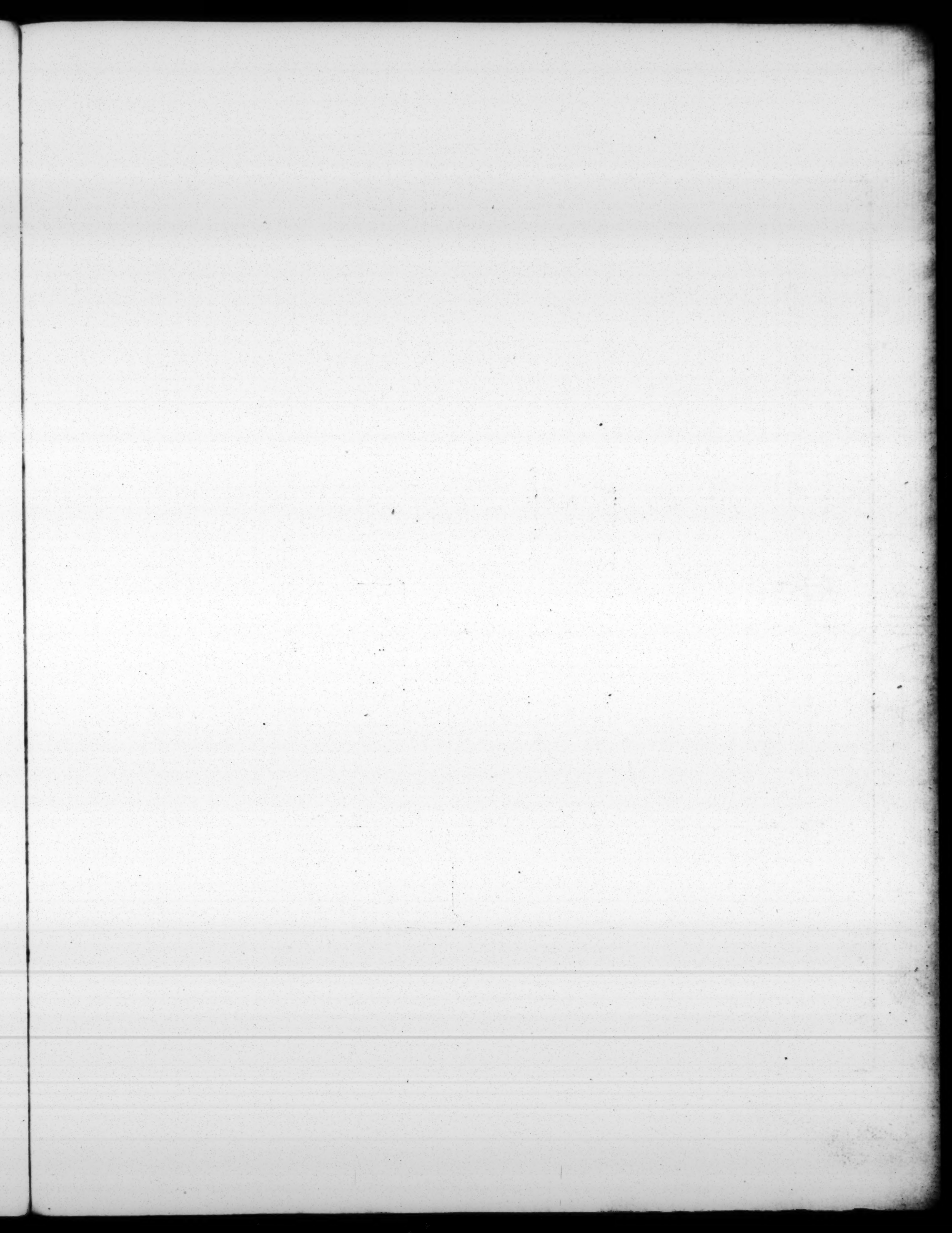




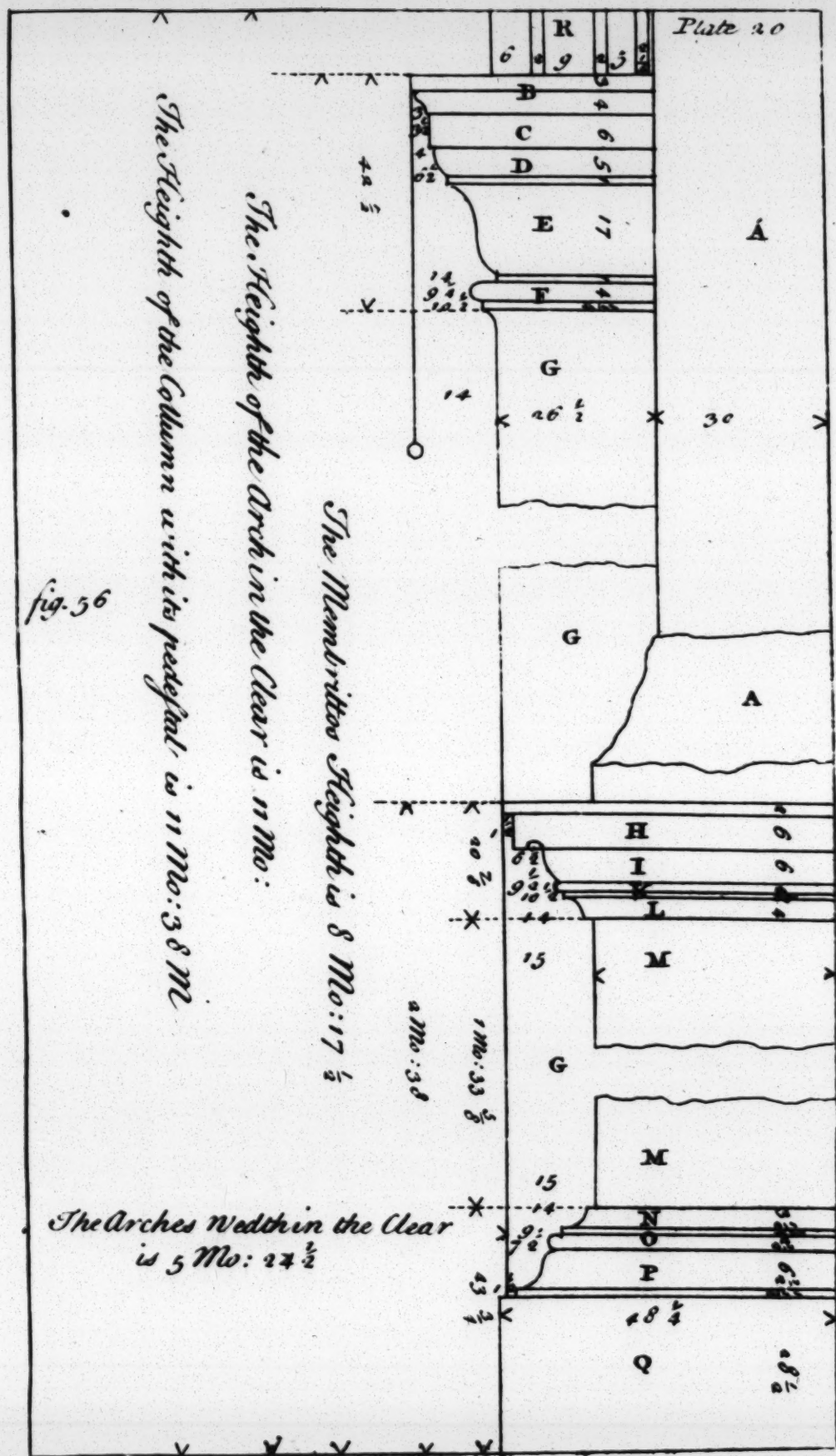
|       |       |       |        |       |       |       |
|-------|-------|-------|--------|-------|-------|-------|
| 0 1/2 | 8 1/2 | 2     | 10 1/2 | 4 1/2 | 3 1/2 | 1     |
| 5 1/2 | 6 1/2 | 7 1/2 | 8      | 4 1/2 | 4 1/2 | 7 1/2 |













The Column of this Order is 9 Modules or Diameters high, and the Intablature one Fifth of that Measure, equal to one Module 48 Minutes. This is laid down by *Palladio*, who I have carefully followed in this Example.

FIG. LIII. *Is the Geometrical Plan of Projections, laid down for Example's Sake.*

*Of the Perspective Plan, &c.*

FIG. LIV. *Is the Geometrical Plan, with its Perspective Representation, taken by a View on a Line with A C.*

The Plan A C D E F G H B being laid down, make A R the Ground-Line, then set up the Point of Diminution from A to I, and the Point of Distance from A towards g, and raise the Line R S at any convenient Distance from B H, and drop Perpendiculars from E and F, to h and i, and draw Lines from A h i B, and R, to I; then draw horizontal Lines from H to S, and from F to n; and from S and n draw Lines to the Point of Sight, which cuts the Ground-Line at i and l; from whence raise Perpendiculars to touch the Line I R, at T and m; from thence, by horizontal Lines, describe N O = P Q and L M; then drop Perpendiculars from all the Lines of the several Mouldings, which determine at C D to the Ground-Line, denoted by Darts on the under Side between A h; from whence, by laying a Rule on I, draw the Lines between A N and L M; then from their Determination on the Diagonal A N, draw all the Lines parallel to A B, to determine at the Diagonal B O; from which draw the Lines between O B and P Q, pointing to I; then drop Perpendiculars from the three front Modilions of the geometrical Plan, as N O, &c. and the cross Lines of the Pannels to the Ground-Line, denoted by Spikes on the upper Side of the Line; from whence draw the three front perspective Modilions pointing to I, and describe those on the Returns by horizontal Lines from e and f, to the Line R S, as at c and d, denoted by Darts; from whence draw Lines to the Point of Distance, and where they cut the Ground-Line, raise Perpendiculars to the Line I R, which is mark'd by Darts; from thence, by horizontal Lines, draw the Return Modilions, with their Capping, and so of the cross Lines, to the Pannels, which compleats the perspective Representation.

*Of the Perspective Elevation. See FIG. LV.*

First drop the Line of Height X W, then from V set on the Point of Sight k, level with I, and equal to A and the Point of Distance, and raise Perpendiculars at Pleasure from the several Projections of the

perspective Plan; then draw occult Lines from the Projections of the geometrical Elevation, to the Line X W, denoted by short Darts; from whence draw horizontal Lines, to cut their respective Perpendiculars, which describes the front Modilions and Mouldings; from whose Projections draw the Returns, by diminishing Lines pointing to I, whose Determination must be, at their respective Perpendiculars, raised from C D; then describe the Height and Width of the Modilion a, by drawing occult Lines from the Modilion Y, to the Line X W, denoted by long Darts, from whence draw horizontal Lines; and so from the Modilion E, to that mark'd b.

*Of the Proportions to the Ionick Arch, or Piazza.*

FIG. LVI. *Shews its Membretto, Impost, circular Architrave, Pedestal, and Columns; with their several Minutes figured in Minutes. See the Terms.*

- A, Body of the Column and broken Base.  
 B, Cimatium.  
 C, Fascia.  
 D, Ovolo.  
 E, Cima Recta.  
 F, Astragal.  
 G, G, G, Body of the Membretto.  
 H, Corona.  
 I, Cima Recta.  
 K, Bead.  
 L, Cavetto.  
 M, M, Die of the Pedestal.  
 N, Cavetto.  
 O, Bead.  
 P, Cima Reversa.  
 Q, Plinth.  
 R, Circular Architrave.

*Of Palladio's Measures to this Arch.*

He says, Chap. 16, in his *Explanation to the Draught*, Page 50, that the Height of the Pedestal must be equal to Half the Width of the Arch in the Clear, which is 2 Modules, 42 Minutes, and one Fourth; but the Figures on the Draught are no more than 2 Modules, 38 Minutes. The latter answers best to the Proportions of the other Members, which I have followed as near as possible.



## Of the Corinthian Order.

### See P L A T E XXI.

FIG. LVI. *Shews the several Proportions of the Base of this Column, with all the Members, figured in Minutes answerable to the Scale of Diameter. See the Terms.*

**A**, Body of the Column,  
**B**, Upper Torus, with its Beads.  
**C**, Cavetto,  
**D**, Lower Torus, with its Bead.  
**E**, Plinth.

FIG. LVII. *A B C D is the Out-Line of the geometrical Plan, wherein the Circles of Projection, with its diagonal and middle Lines, view'd from a middle Station M L K D, is the out Line of its perspective Representation, with its Curves, Diagonals, and middle Lines.*

The geometrical Plan being supposed to be draw'd, describe the Ground-line E F of a Length at Pleasure, at any intended Distance from A D; then from o raise the Point of Diminution G, and let fall the Point of Distance towards P, and draw the Line H F parallel to C D, at any Distance; then drop Perpendiculars from A b D to the Ground-line as E o H, and draw the Lines E G, O G, h G and F G; then draw horizontal Lines from C to H, and from D to k; from whence draw Lines to the Point of Distance, and where they cut the Ground-Line E F, as at i, &c. raise Perpendiculars to touch the Line G F as at I, &c. from whence draw the out Lines K L and M N; then draw the diagonal Lines N L and M K, and the middle Line l m through their Interfection in the Centre; then find the several Divisions for the Curves, and drop Perpendiculars from the Divisions f s and u to the Ground-Line E F denoted by Darts, from whence draw Lines to the Point G; then, from the Divisions at G and b, draw horizontal Lines to d and e denoted by Darts, from whence draw Lines to the Point of Distance, which cuts E F at the Darts below the Line; then proceed by perpendicular and horizontal Lines, as in the foregoing Bases.

#### Of the perspective Base.

First describe the geometrical Elevation, FIG. LVIII. with its Angle-projections, as shewed in the several foregoing Examples; then drop the Perpendicular Line Q R, so that w x is equal to A E, and fix the Point of Diminution from Y to Z, equal to b G, also the Point of Sight a level with z, and so far

distant from Q as the Point of Distance is from o; then bring the Projection, &c. from S, by occult Lines to Q R denoted by Darts, and conveyed by horizontal Lines to the Line Y; in the same Manner convey those at T to X X, and the same at V to W W; then raise Perpendiculars from the Divisions of the Plan, and describe the several Mouldings which is a Guide to draw the circular Lines of the Base, and draw the Plinth and Top as the dotted Lines direct, which finishes the perspective Base.

## Of the Corinthian Capital.

### See P L A T E XXII.

FIG. LX. *Represents the geometrical Draught of Palladio's Corinthian Capital, with all its proper Measures figured in Minutes.*

FIG. LXI. *Is the geometrical Plan of Projections; its perspective Representation is found, and all the Measures of the perspective Elevation, FIG. LXII. given, by the same Rules as those of the foregoing Examples; only this is to be observed, the Circle of the geometrical Plan is divided by 8 Lines, which gives 16 Places of Divisions, in order to give the Heights and Projection of each Lief, and the two Elevations are divided by Lines answerable thereto, a c of the Plans answers to a c of the Elevations, d b to d b, f e to f e, h g to h g, and k l to k l, and so of every Part of the Work as in all other Examples.*

## Of the Corinthian Intablature.

### See P L A T E XXIII.

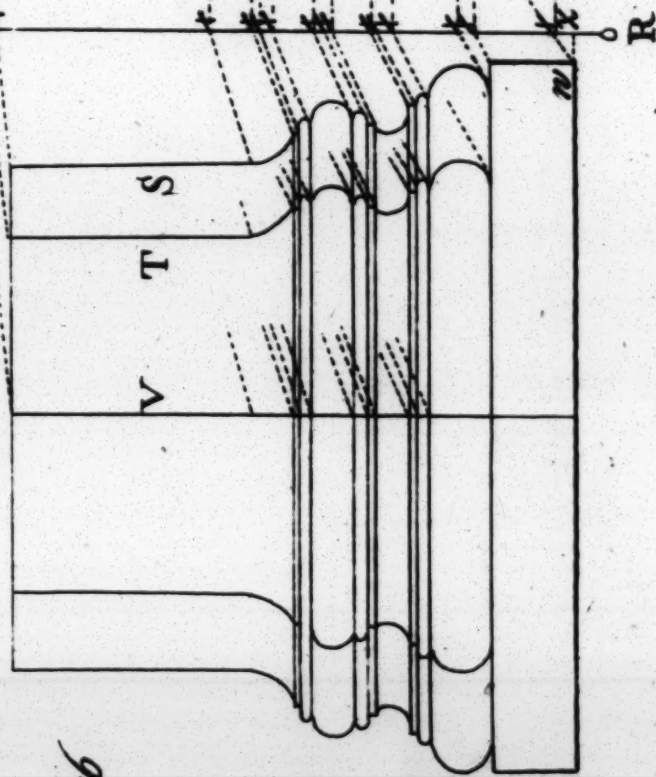
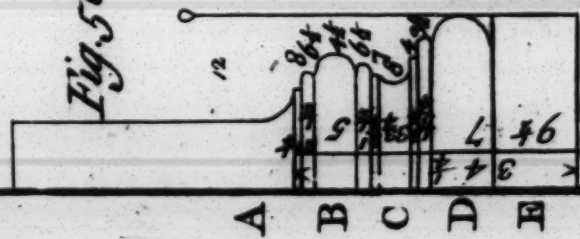
FIG. LXIII. *Is the geometrical Elevation, with the Proportions of all its Members figured in Minutes. See the Terms.*

**A**, Cima Recta.  
**B**, Cima Reverfa.  
**C**, Corona.  
**D**, Cap of the Modilion.  
**E**, Modilion.  
**F**, Ovolo.  
**G**, Dentals.  
**H**, Cima Reverfa.  
**I**, Freeze.  
**K**, Cimacium.  
**L**, First Facia.  
**M**, Second Facia.  
**N**, Third Facia.  
**O**, i, A Plumb-Line shewing the Middle of the Column.

This



Fig. 56



W Fig. 59.

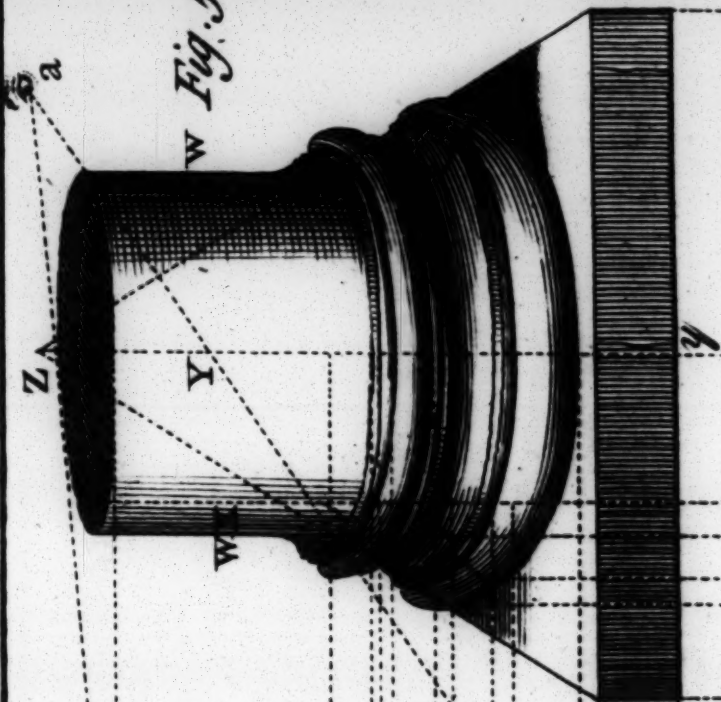
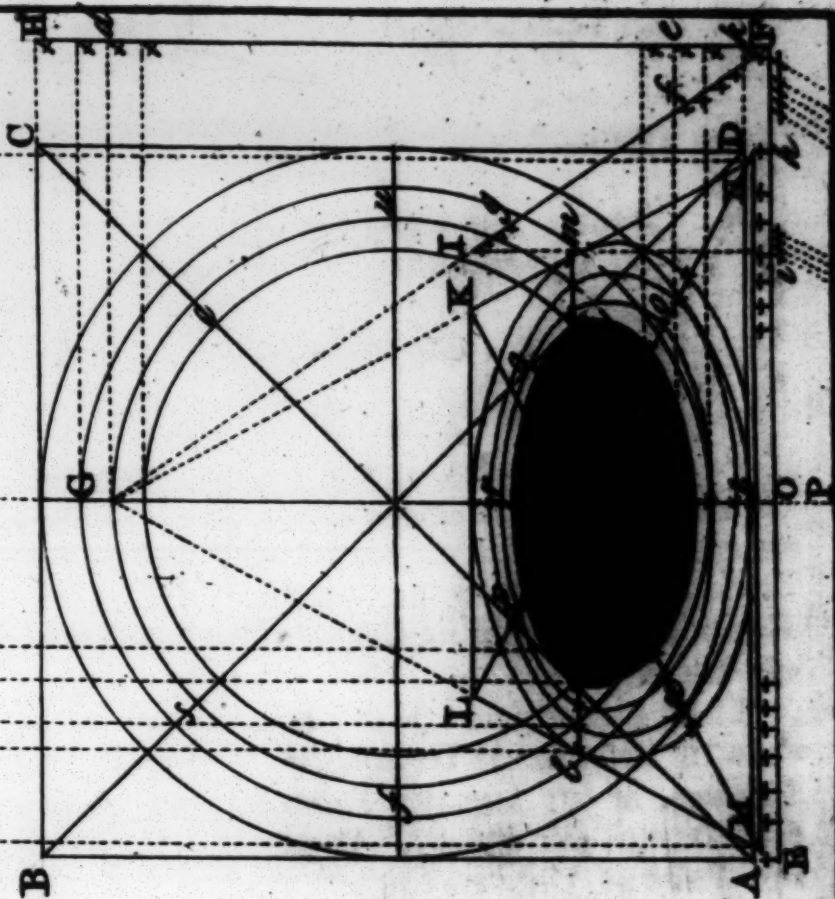
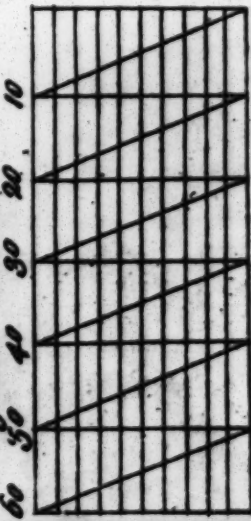


Fig. 57



*A Scale of 60 Minutes, or 1 Diameter  
of the Column.*









Plat. 22.

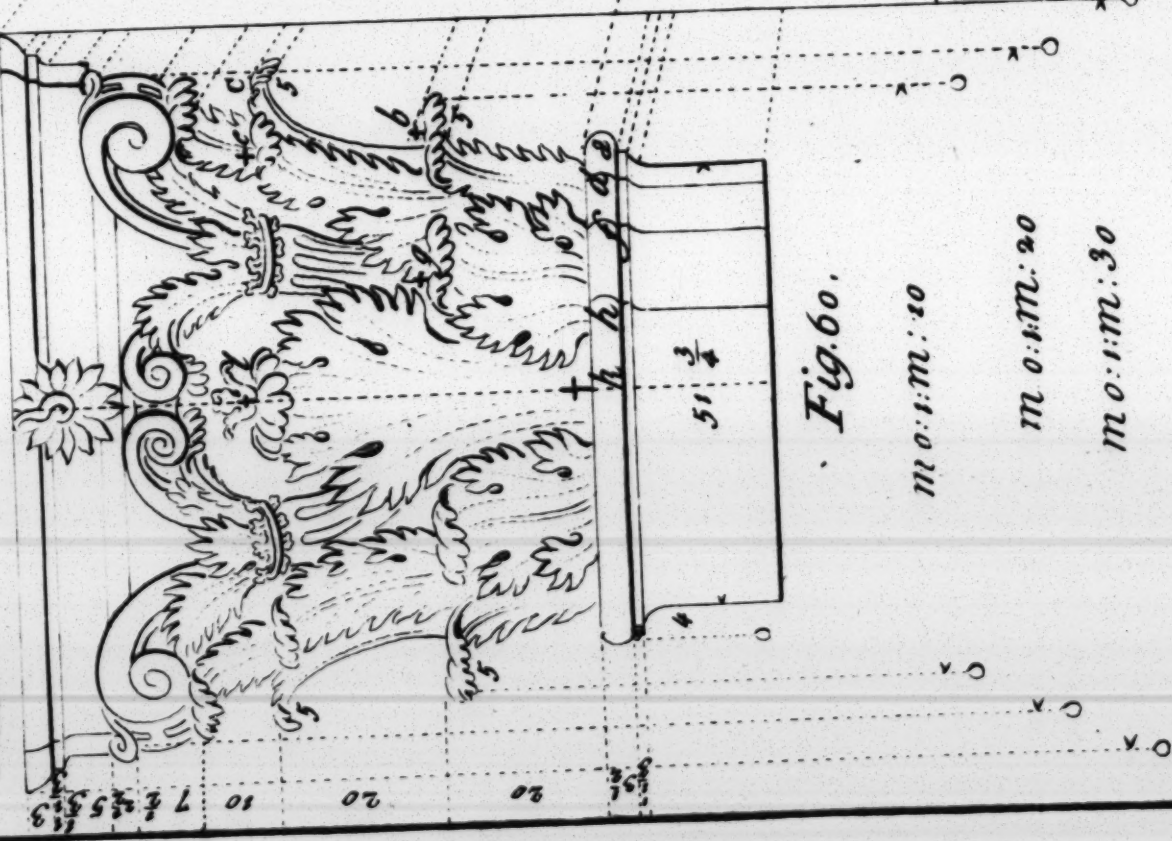


Fig. 60.

m o : i : m : 20

m o : i : m : 20

m o : i : m : 30

Fig. 62.

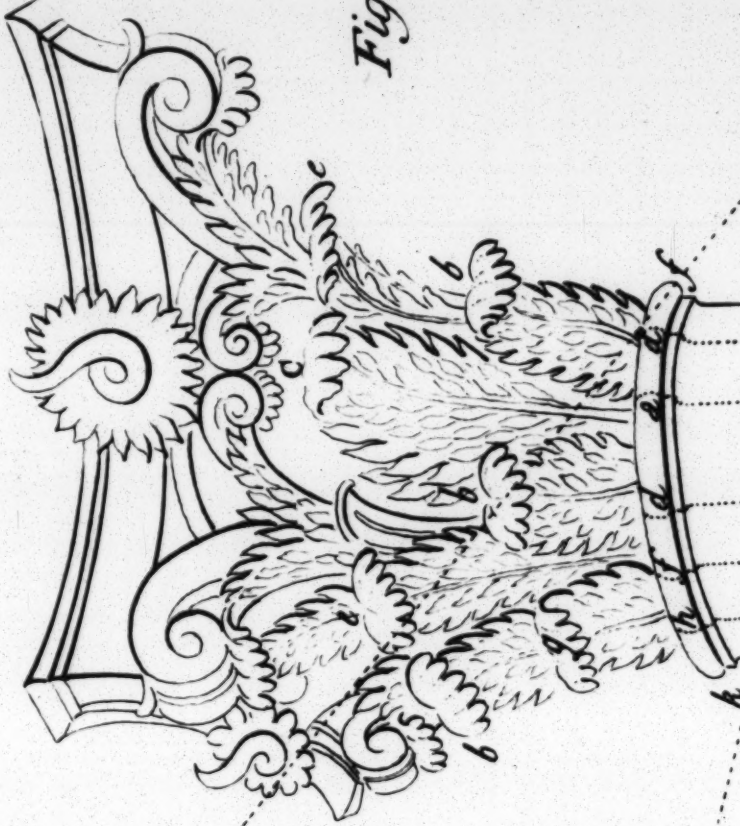
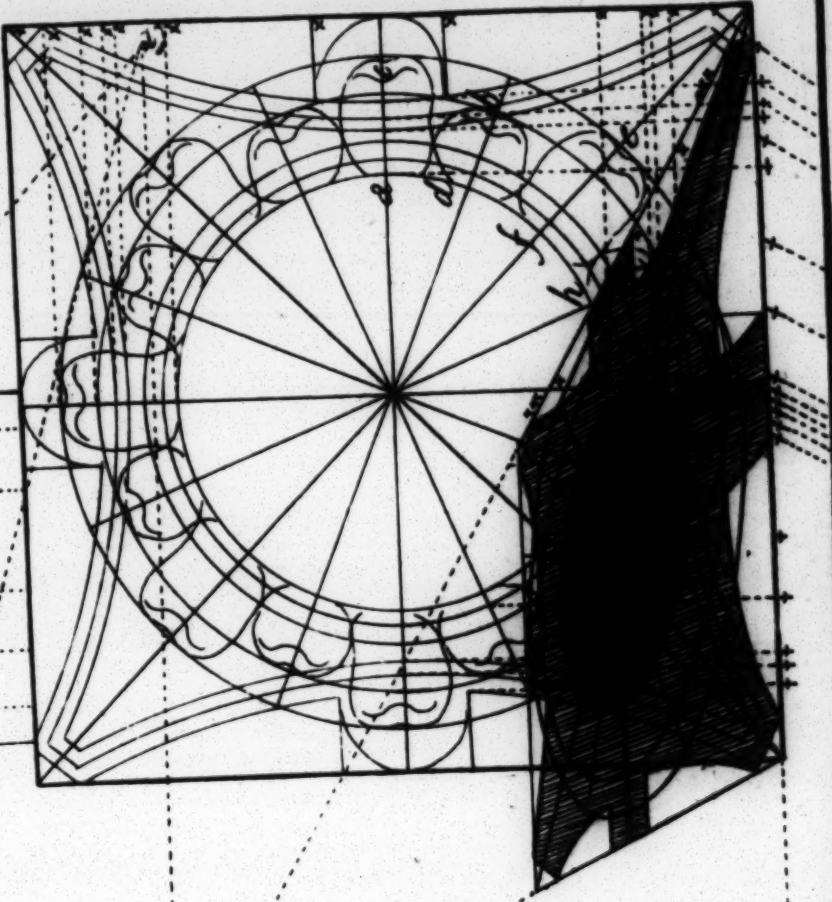


Fig. 61.



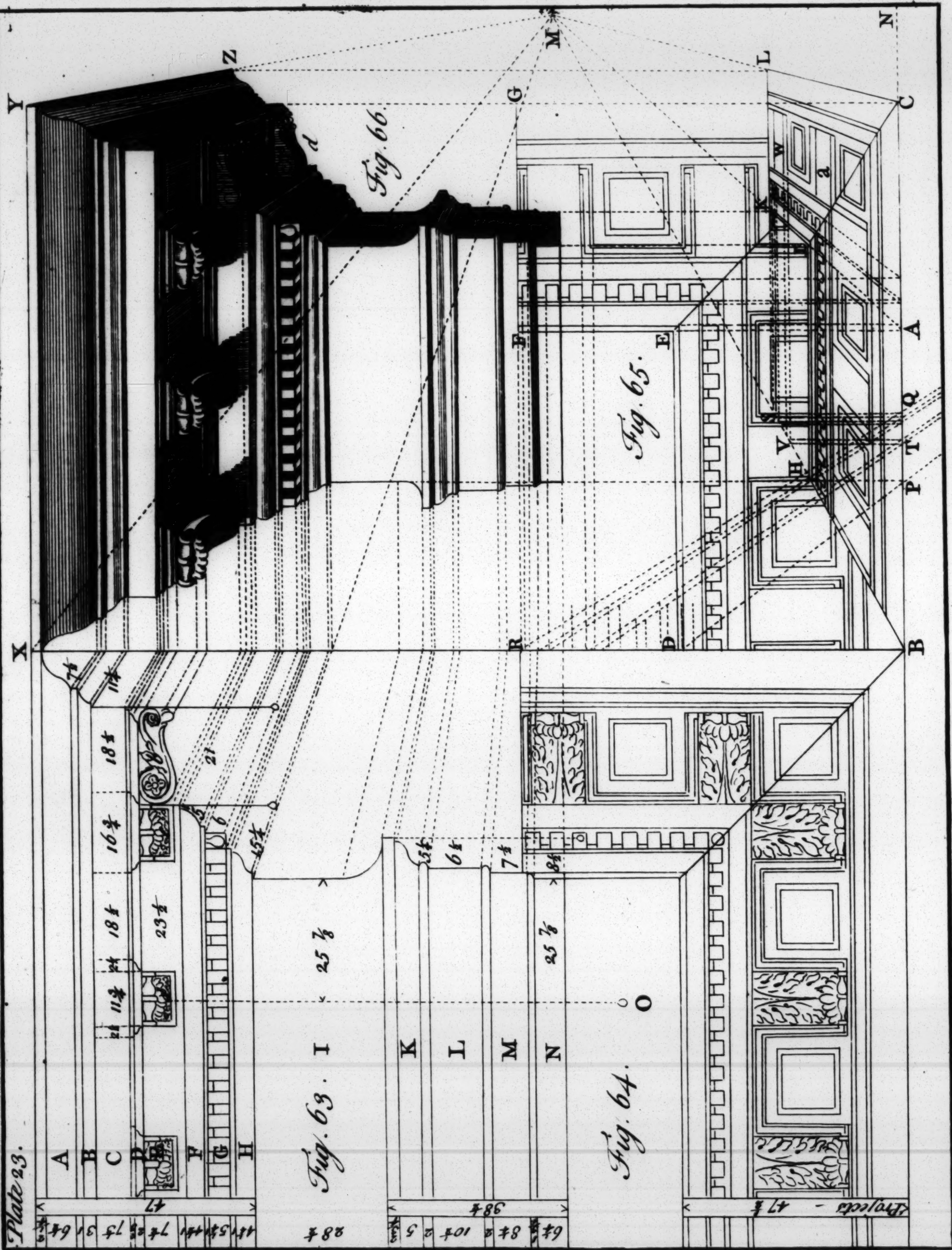




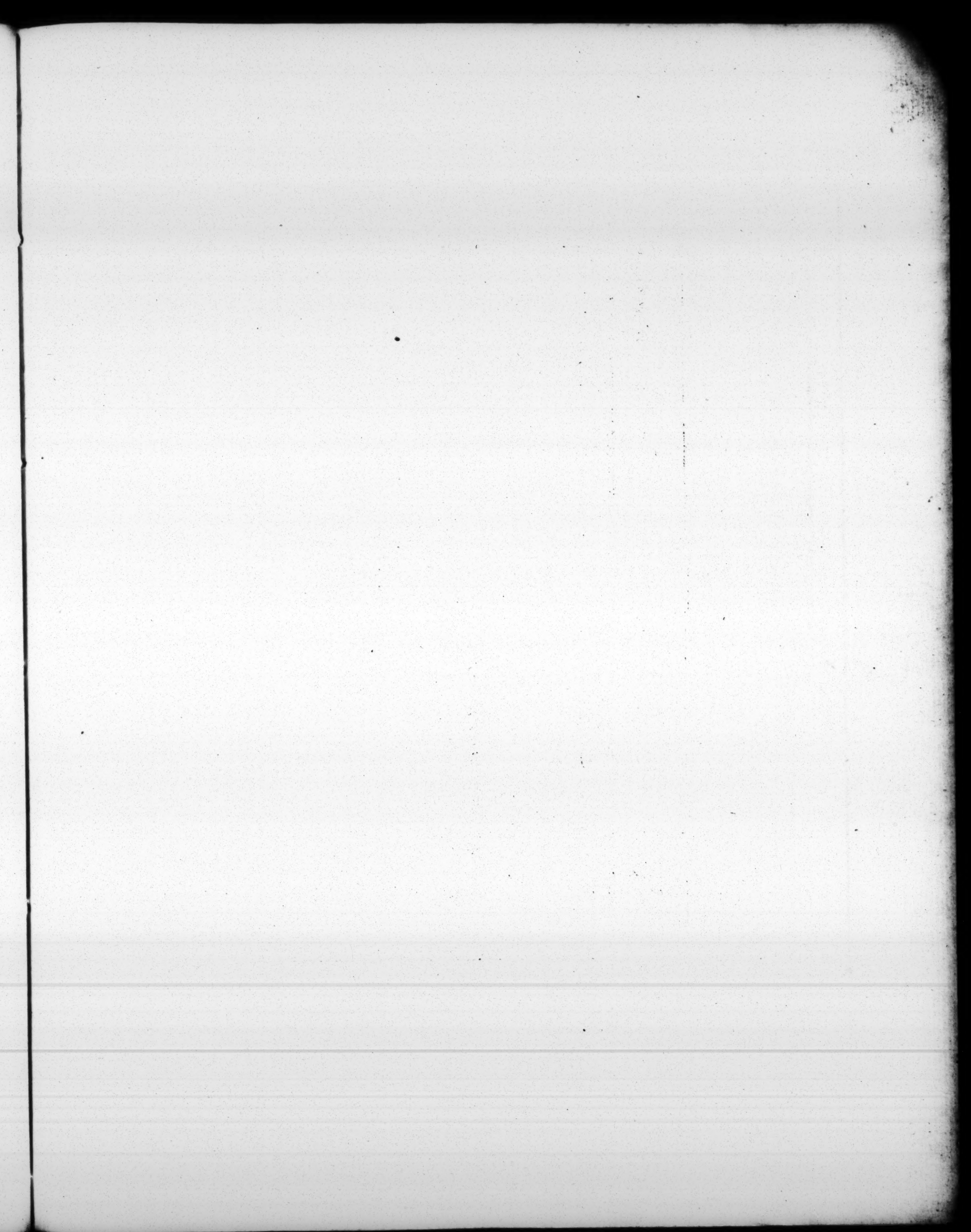














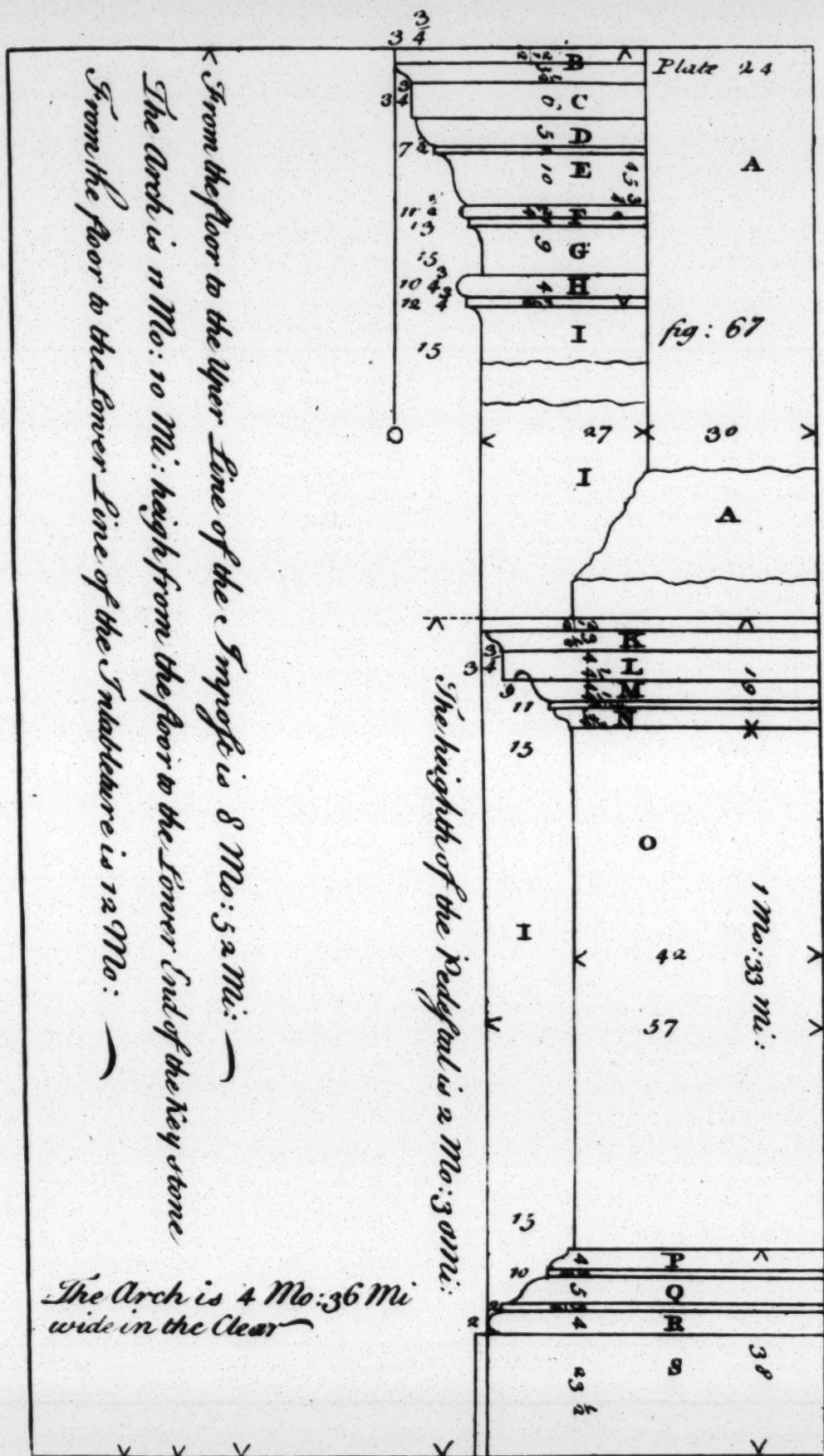








Fig. 71.

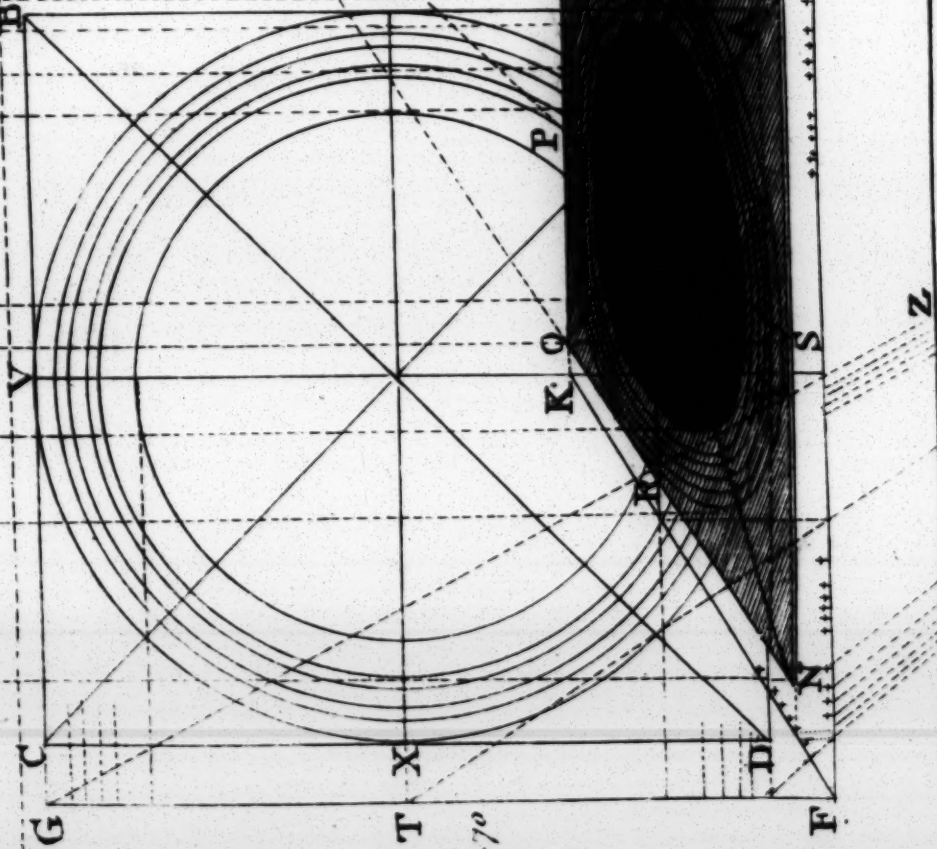
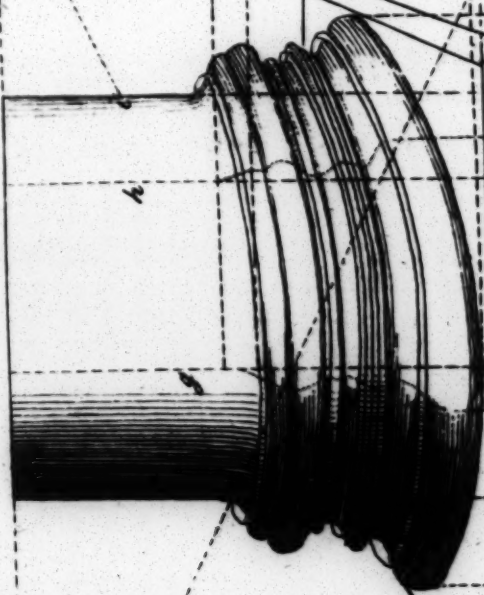
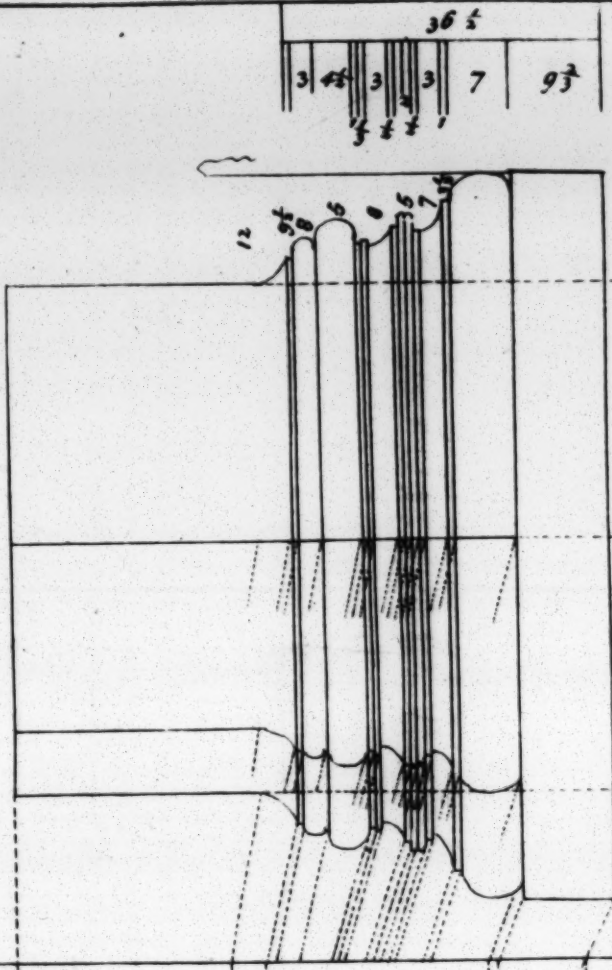
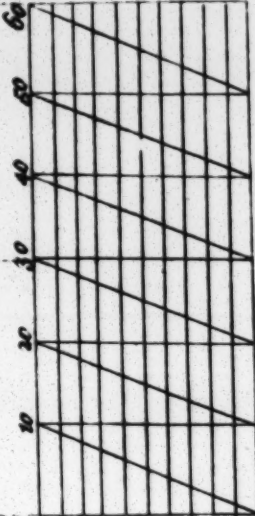


Fig. 70.



The Diameter divided into Minutes



|   |   |   |   |   |   |
|---|---|---|---|---|---|
| 3 | 4 | 3 | 3 | 7 | 9 |
| 3 | 4 | 3 | 3 | 7 | 9 |



This Intabature is one Fifth of the Column's Height, answerable to *Palladio*, Chap. 17, and figured Draught, Page 43.

FIG. XLIV. Is the geometrical Plan or Soffetta of the Cornice, laid down to shew more plain its several Divisions; and DEFG B, FIG. LXV. is the same Plan from whence the perspective Soffetta is found.

Fix the Point of Sight and Diminution M, and Point of Distance from N downwards equal distant to N B; then drop a Perpendicular from E to the Ground-Line at A, and draw Lines from B A C to M, and a horizontal Line to R; then from R and D draw Lines to the Point of Distance, which cuts the Ground-Line P and Q, from whence raise Perpendiculars to touch the Line B M, as at H and S, from whence describe KL and HI, then is GBHIL the out Line of the perspective Plan.

Draw the diagonal Line IC, and drop Perpendiculars from all the projecting Lines of the Return C EFG to the Ground-Line between A C, from whence draw Lines to KL pointing to M; also from all the Divisions between B A and D E, drop Perpendiculars to the Ground-Line between B A, from whence draw Lines to HI pointing to M; then from all the Divisions draw the projecting Lines between BC and HI, then from all the width Lines of the Return, between C EFG, draw Horizontals to the Line B R, from whence draw Lines to the Point of Distance, which cuts the Ground-Line as at T, &c. from whence raise Perpendiculars to touch the Line B M, which convey horizontally to the Return IKLC, gives the perspective Widths of the Modillions w a, &c. and finishes the Plan of Projections CBHIKLC.

The perspective Elevation, FIG. LXVI. is found by the perpendicular Lines from the Plan, cutting Horizontals from the Line of Heights and their several Returns YZ, &c. is drawn as in the foregoing Examples, which needs no farther Explanation; only observe, that the Heights of the two returned Modillions, marked e d, are found by occult Lines from those of the same Mark in FIG. LXIII.

### Of the Corinthian Arch.

#### See P L A T E XXIV.

FIG. LXVII. Represents half the Pedestal, Membretto, and Impost, with all their Members figured in Models and Minutes. See the Terms.

A, Body of the Column, and broken Base.  
B, Cima Reverfa.  
C, Fascia.

D, Ovolo.  
E, Cima Recta.  
F, Bead.  
G, Neck of the Membretto.  
H, Astragal.  
III, Body of the Membretto.  
K, Cima Reverfa.  
L, Corona.  
M, Cima Recta.  
N, Cima Reverfa.  
O, Die of the Pedestal.  
P, Cima Recta.  
Q, Cima Reverfa.  
R, Torris.  
S, Plinth.

*Palladio*, in Chap. 17, says, The Height of the Pedestal to this Order must be equal to one Fourth of the Column's Height, which is 2 Models 22 Minutes and a half; but in his figured Draughts, Pages 39 and 41, he has set down 2 Models 30 Minutes for their Pedestals Height. I have followed the latter, it being more suitable to the other Members, especially the Key-stone of the Arch.

### Of the Compos'd Order.

#### See P L A T E XXV.

FIG. LXVIII. Represents the geometrical Elevation of the Base, to the Column of this Order, with all the Measures, figured by Minutes, taken from the adjoining Scale. See the Terms.

A, Body of the Column.  
B, Bead.  
C, Upper Torus.  
D, Upper Cavetto.  
E, Couplet Beads.  
F, Lower Cavetto.  
G, Lower Torus.  
H, Plinth.

FIG. LXIX. Represents the geometrical Plan of Projection, viewed oblique; ABCD is the Out-Line, and MNOL its perspective Representation. The Ground-Line EF of this Example, is at a Distance from the Front-Line of the Plan AD, and the Line FG may be at any Distance from CD, as has been mentioned in the foregoing Examples. H is the Point of Diminution; and the Point of Distance is set from F towards I: The Divisions of the Circle on the diagonal and middle Lines, LN = MO, and RQ are found by dropping Perpendiculars from those of F



of the geometrical Plan, marked  $AC = BD$  and  $WX$ , to the Ground-Line  $FE$ , denoted by Darts; from whence Lines are drawn to  $H$ , which gives the Divisions on the before-mentioned perspective Diagonals, and middle Lines.

The Divisions on the middle Line  $SP$  is found by horizontal Lines from those on the Line  $VY$ , to the Line  $FG$ , as at  $D$  and  $G$ ; and from thence by Lines to the Point of Distance, and then by Perpendiculars at their cutting the Ground-Line to touch the Line  $FK$ , from whence horizontal Lines give the Divisions at  $S$  and  $P$ ; but these and the Curves may be found by the Method lay'd down for the foregoing Bases.

#### Of the Perspective Elevation.

FIG. LXX.  $cd$  and  $ef$  are equal to  $EH$ ; and  $el$  is equal to  $E$ , and the Line of Distance towards  $I$ ;  $d$  is the Point of Diminution, and  $f$  the Point of Sight,  $ab$  is the Line of Conception, and  $lm$  is equal distant with the Lines  $AD$  and  $FE$ , FIG. LXIX. The Lines  $ihg$ , with their Mouldings, and those mark'd  $ihgk$ . FIG. LXVIII. and LXX. answers the same Purposes as those of all the foregoing geometrical and perspective Bases, therefore requires no farther Explanation.

#### Of the Composed Capital.

#### See P L A T E XXVI.

FIG. LXXI. Is the geometrical Elevation, minuted according to Palladio's Proportions.

FIG. LXXII. Is its Plan of Projections;  $ABCD$  is its Out-Line, and  $EF$  the Off-set Line;  $BO$  is the oblique Position, and  $I$  the Point of Diminution;  $CMLB$  is the perspective Representation, and  $EN$  its off-set Line; the Line of Distance is set from  $G$  towards  $H$ ;  $PQ$  is the Line of Conception, and  $K$  is the Point of Sight.

The perspective Elevation is found in every Respect, like that of the Corinthian Order; therefore is judged needless to be here represented.

#### Of the composed Intablature.

#### See P L A T E XXVII.

FIG. LXXIV. Is the geometrical Elevation, with all its several Members figured by Minutes. See the Terms.

**A** B, a Line shewing the Middle of the Column.

$C$ , Cima Recta.  
 $D$ , Cima Reverfa.  
 $E$ , Corona.  
 $F$ , Capping of the Modilion.  
 $G$ , Upper Face of the Modilion.  
 $H$ , Lower Face of the Modilion.  
 $I$ , Cima Reverfa and Bead.  
 $K$ , Freeze.  
 $L$ , Cimacium.  
 $M$ , First Fascia.  
 $N$ , Second Fascia.

This Intablature answers Palladio, Chap. 18, and figured Draught, Page 50.

FIG. LXXV. Is the Soffetta of the Cornice.

FIG. LXXVI. Is the Soffetta of the Cornice, with its perspective Representation,  $CYgFED$  is supposed to contain 2 Modilions in each Return, one of which is cut off by  $GH$  for Want of Room;  $IK$  is the Ground-Line, from  $I$  towards  $Z$  is the Line of Distance,  $L$  is the Point of Diminution.

Drop Perpendiculars from all the Lines of Projection between  $GH$  and  $FG$ , also from  $E$  to the Ground-Line, which are denoted by Darts on the upper Side; from whence draw Lines to  $L$ , then by horizontal Lines convey  $Y$  to  $S$ , and  $E$  to  $i$ , from whence draw Lines to the Point of Distance, which cuts the Ground-Line at  $T$  and  $V$ ; from thence raise Perpendiculars to touch the Line  $LK$  at  $R$  and  $h$ , from whence draw  $NR$  and  $OP$ ; then draw the Diagonal  $OC$ , and drop Perpendiculars from all the Lines of Width between  $FE$  and  $TK$  to the Ground-Line, denoted by Darts on the under Side, from whence draw the Widths to  $OP$ ; then, from the Divisions on the Diagonal  $OC$ , draw the Lines of Projection between  $CQ$  and  $OP$ ; then convey the Modilions  $d$ , &c. to  $X$  and  $W$ , and proceed by Lines to the Point of Distance, and so on as before taught, which will give the Widths of Modilions  $k$  and  $C$ .

FIG. LXXVII. Is the perspective Elevation;  $a$  is the Point of Sight, and  $L$  the Point of Diminution;  $bc$  the Line of Heights equal distant from the Nose of the Cornice, as the Ground-Line  $IK$  is from the Front-Line of the geometrical Plan; all the several Parts are found by occult, horizontal and perpendicular Lines, as those of the foregoing Examples, which requires no farther Explanation.

Of



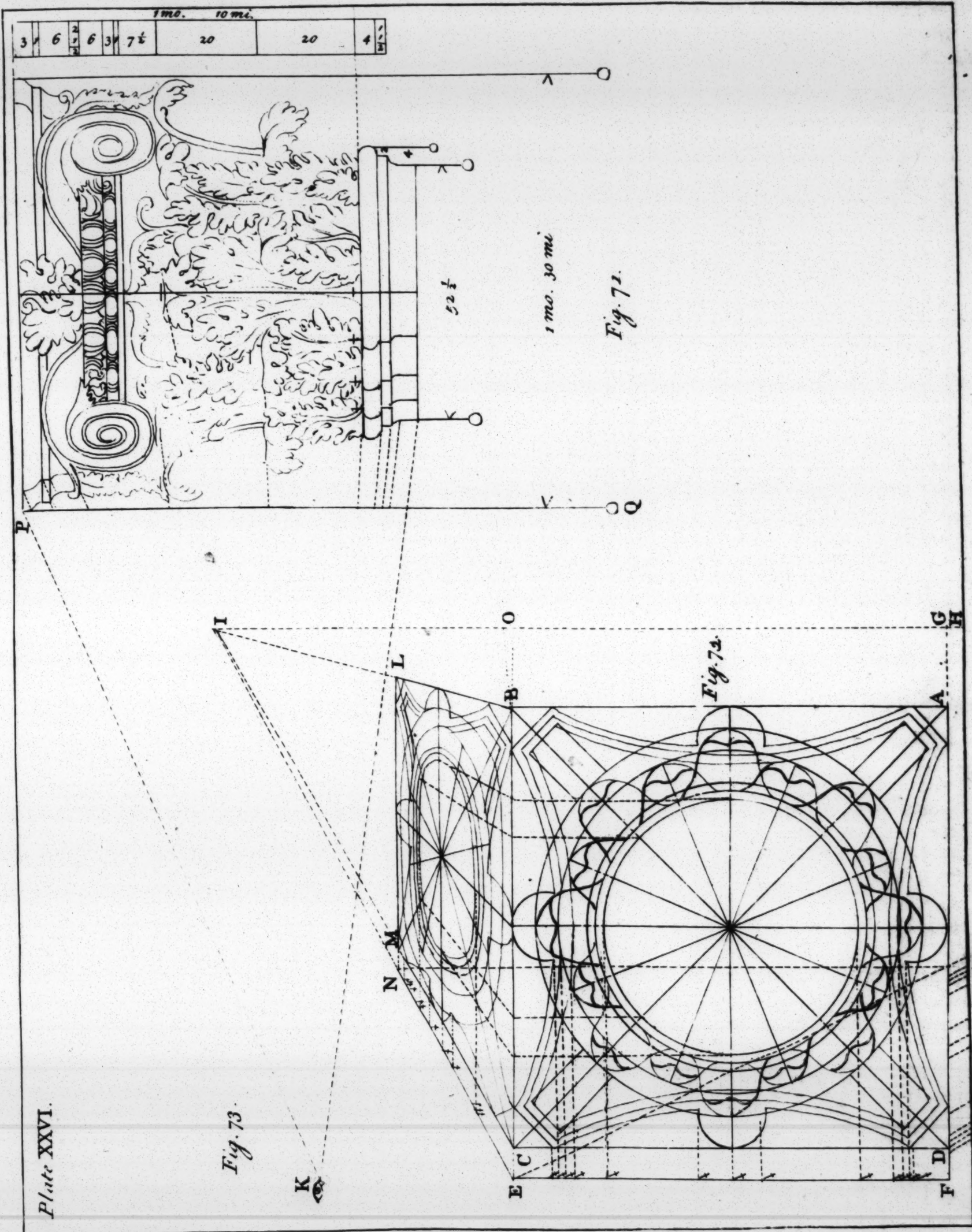


Plate XXVI.

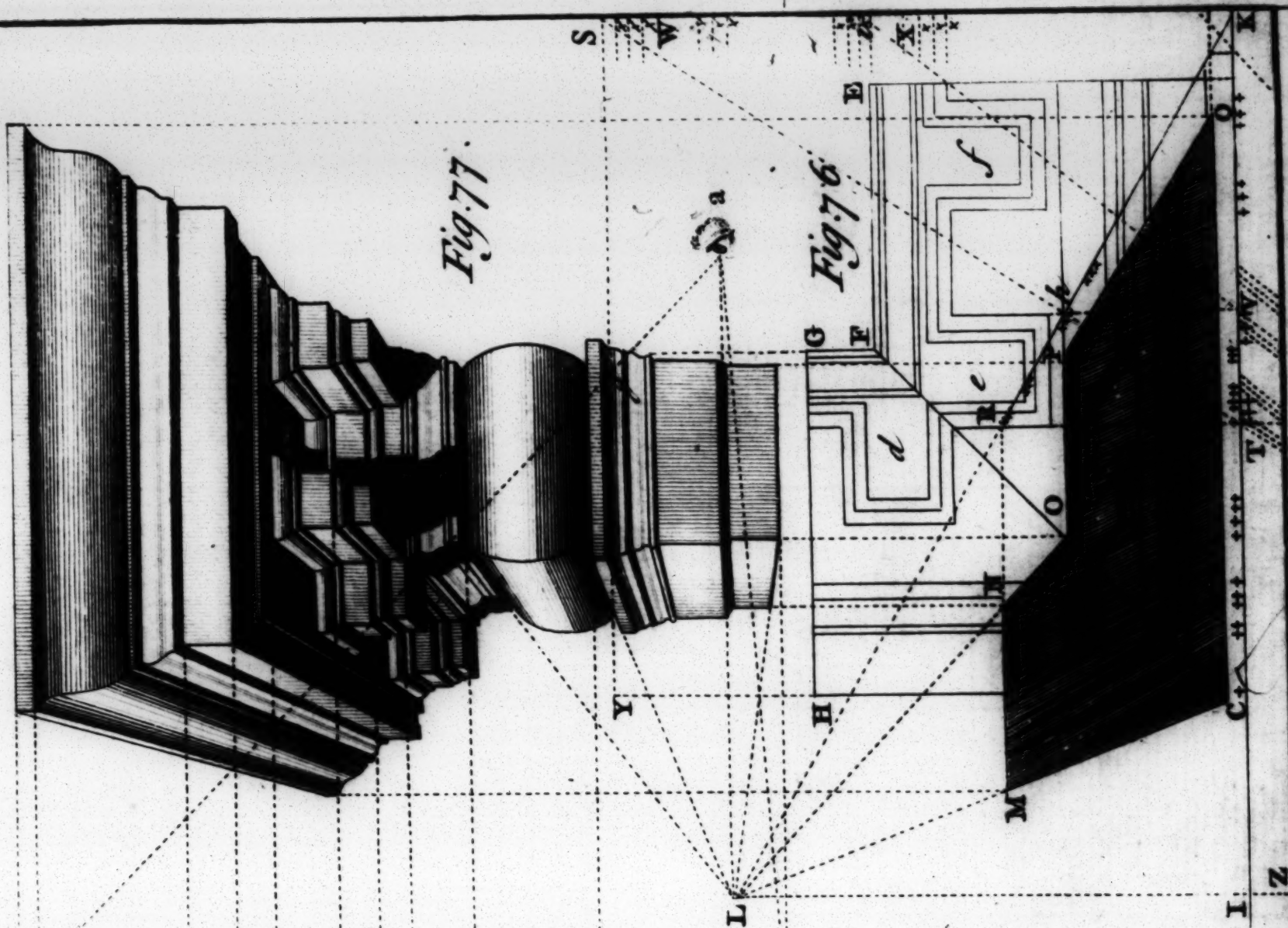
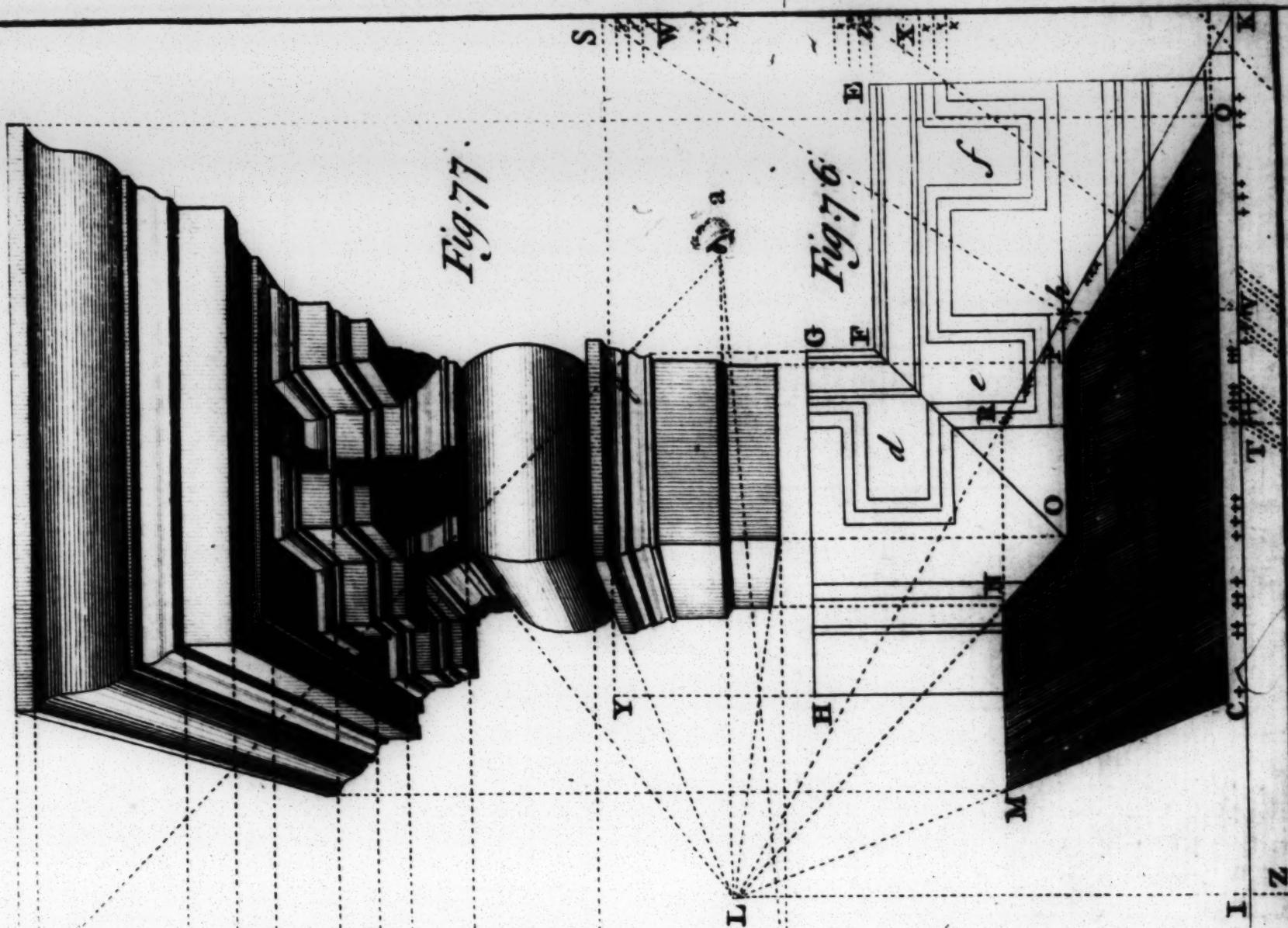
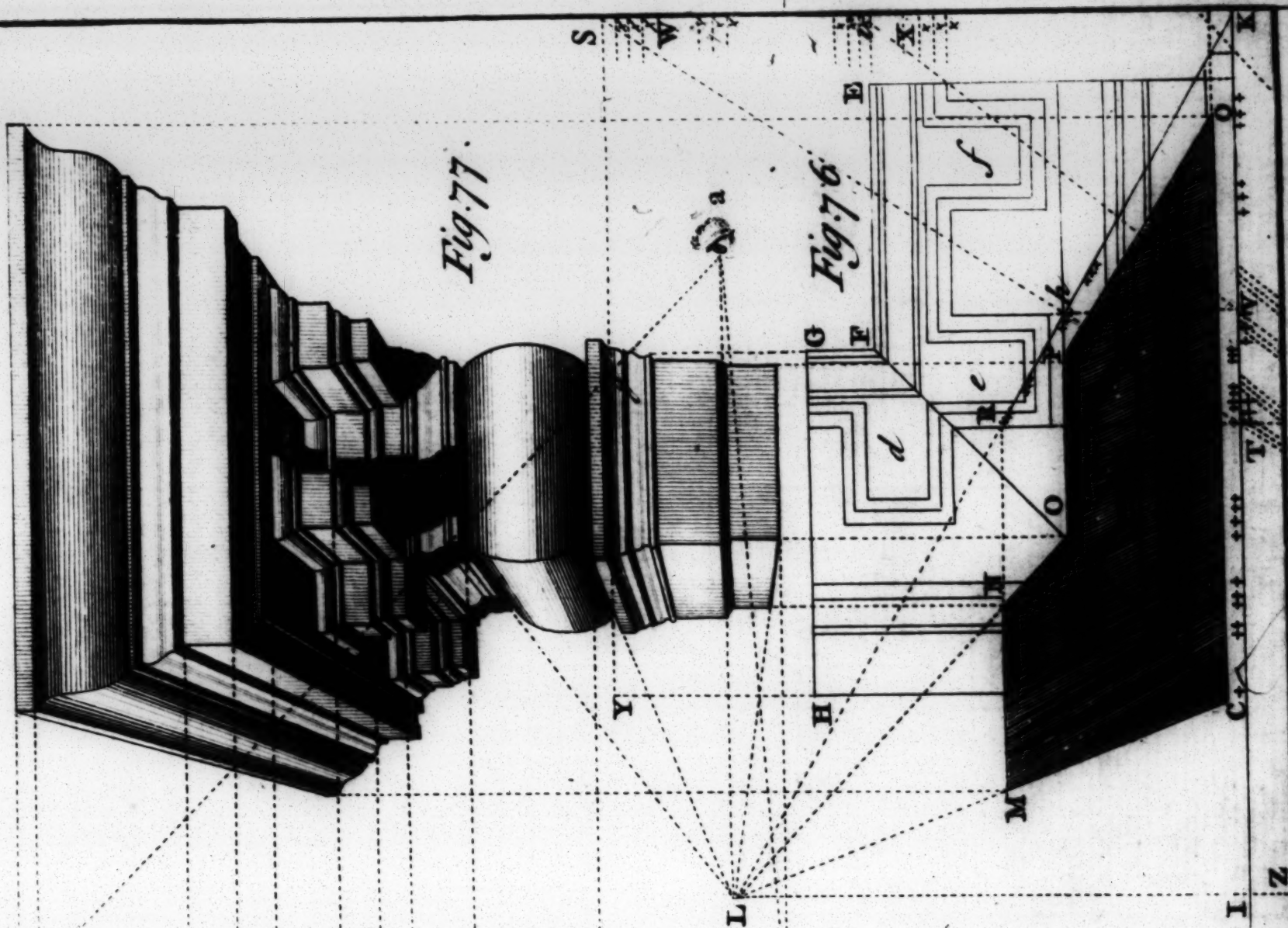
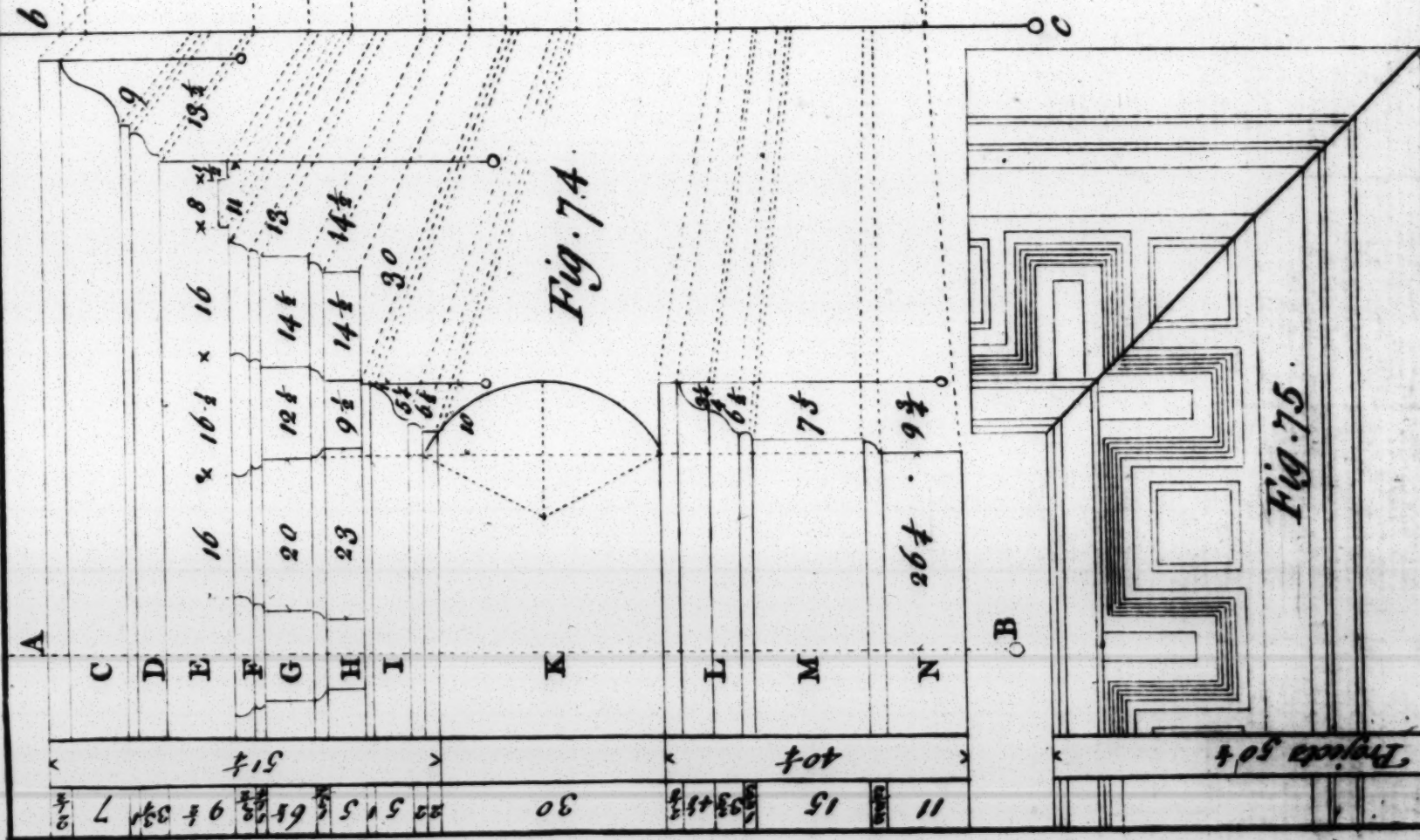
Fig. 73.

Fig. 72.





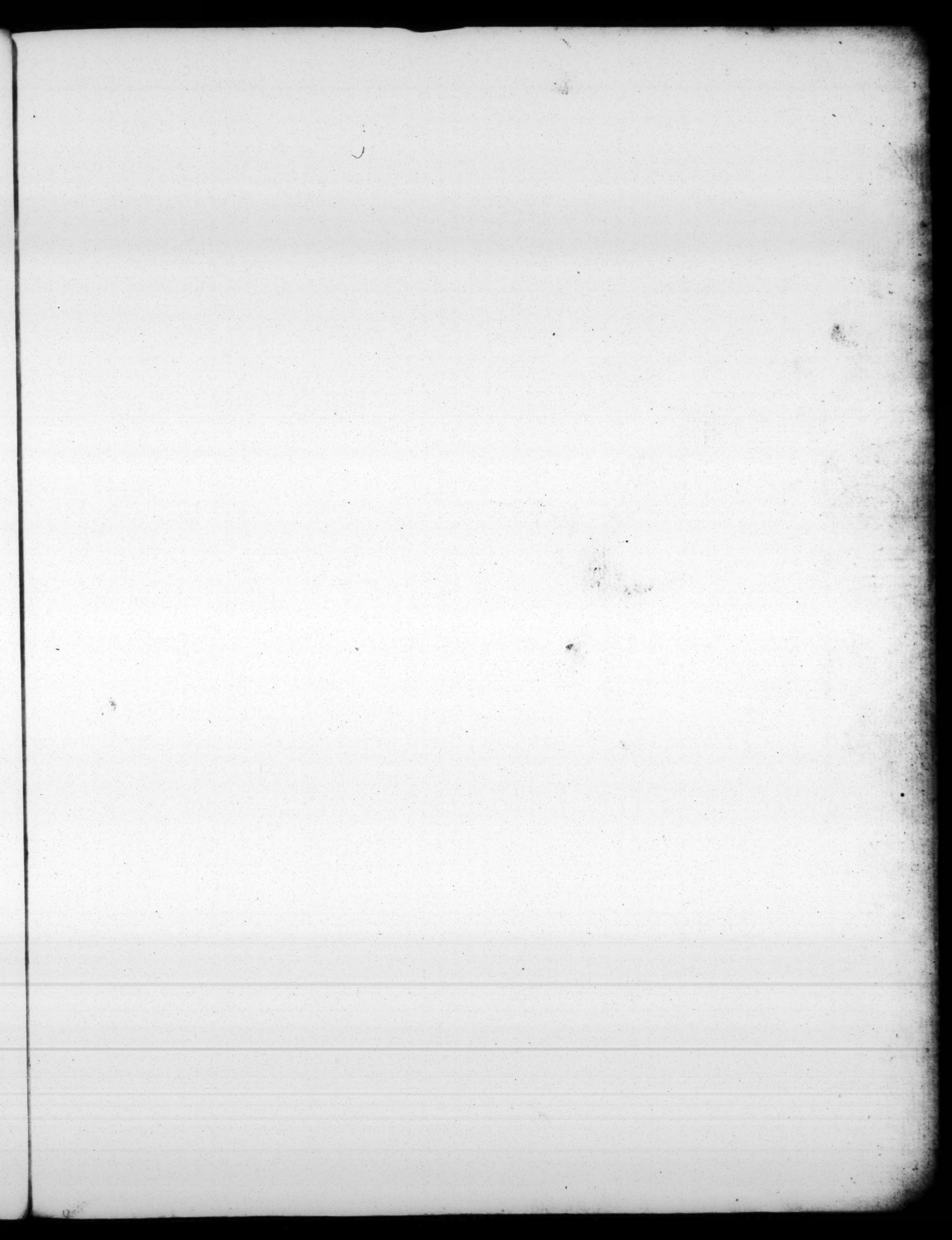


















*Of the Composite Arch.*

See P L A T E XXVIII.

FIG. LXXVIII. Represents half the Pedestal, Membretto and Impost of the composed Arch, with all its Members figured in Minutes. See the Terms.

- A, Cima Reverfa.  
B, Facia.  
C, Cima Recta.  
D, Ovolo.  
E, Collar of the Membretto.

- F, Astregal.  
G G, Body of the Membretto.  
H H, Body of the Column and broken Base.  
I, Cima Reverfa.  
K, Fascia.  
L, Cima Recta.  
M, Astregal.  
N, Die of the Pedestal.  
O, Bead.  
P, Cima Reverfa.  
Q, Toris.  
R, Plinth.  
S, Pedestal to the Membretto.

This Arch, with all its Members, is answerable to that of *Palladio*, Chap. 18, and figured Draughts, Pages 46 and 48.

F I N I S.









